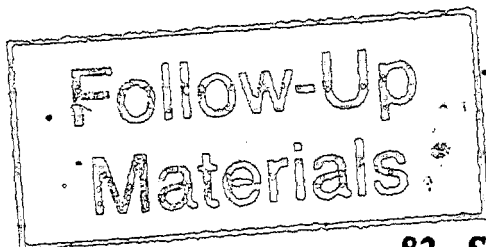


2/5



82- SUBMISSIONS FACING SHEET

MICROFICHE CONTROL LABEL



REGISTRANT'S NAME

Novozymes

*CURRENT ADDRESS

**FORMER NAME

PROCESSED

FEB 11 2003

THOMSON
FINANCIAL

**NEW ADDRESS

FILE NO. 82-

5716

FISCAL YEAR

12-31-01

* Complete for initial submissions only ** Please note name and address changes

INDICATE FORM TYPE TO BE USED FOR WORKLOAD ENTRY:

12G3-2B (INITIAL FILING)

☐

AR/S (ANNUAL REPORT)

☒

12G32BR (REINSTATEMENT)

☐

SUPPL (OTHER)

☐

DEF 14A (PROXY)

☐

OICF/BY:

dlw

DATE

: 2/5/03

82-5116

AR/S

12-31-01 03 FEB -5 AM 7:21

Annual

Report 2001

novozymes®

Unlocking the magic of nature

Glossary

Amylases

Starch-degrading enzymes.

Antimicrobial peptides

Peptides that kill bacteria and fungi.

BioPrep®

Enzyme product to remove wax and other impurities from cotton before it undergoes further treatment.

Cellulases

Cellulose-degrading enzymes.

Enzymes

Enzymes facilitate the conversion of raw materials into finished products, such as bread, beer, and cheese.

Enzyme products

Enzyme products are used in a wide range of applications, from food processing to pharmaceuticals.

Fermentation process

The fermentation process is used to produce a wide range of products, from beer and wine to cheese and yogurt.

Food processing

Enzymes can be used to replace substances such as sugar in food products.

Hyaluronic acid

Hyaluronic acid (HA) is a special type of polysaccharide found in connective tissue of all mammals. Its relative viscosity makes it an excellent natural lubricator.

Lipases

Fat-degrading enzymes.

Low-allergenic proteins

Proteins that are modified so as to significantly reduce the risk of allergy.

MTBE (methyl tertiary butyl ether)

Compound used to increase the octane count of petrol.

Peptides

Natural biological substances built from small chains of amino acids.

Certain peptides form an important part of the body's defence mechanisms against foreign organisms.

Proteases

Enzymes that degrade proteins found in stains from e.g. grass, blood, egg and sweat in clothes.

Proteins

Enzymes are proteins that have a catalytic effect, i.e. help transform one compound into another.

Supply chain management

A supply chain is the activities necessary to produce and deliver a finished product/service – the entire process from supplier to customer.

Supply chain management refers to the management of these activities in order to create most value for customers, the company and other players.

Sweetzyme®

Enzyme product that converts glucose to fructose, used to sweeten soft drinks.

Trans fatty acids

Types of fat believed to be a major cause of cardio-vascular disease.

Trans fatty acids are formed during the hydrogenation process – the hardening of fats.

Environmental and Social Report 2001

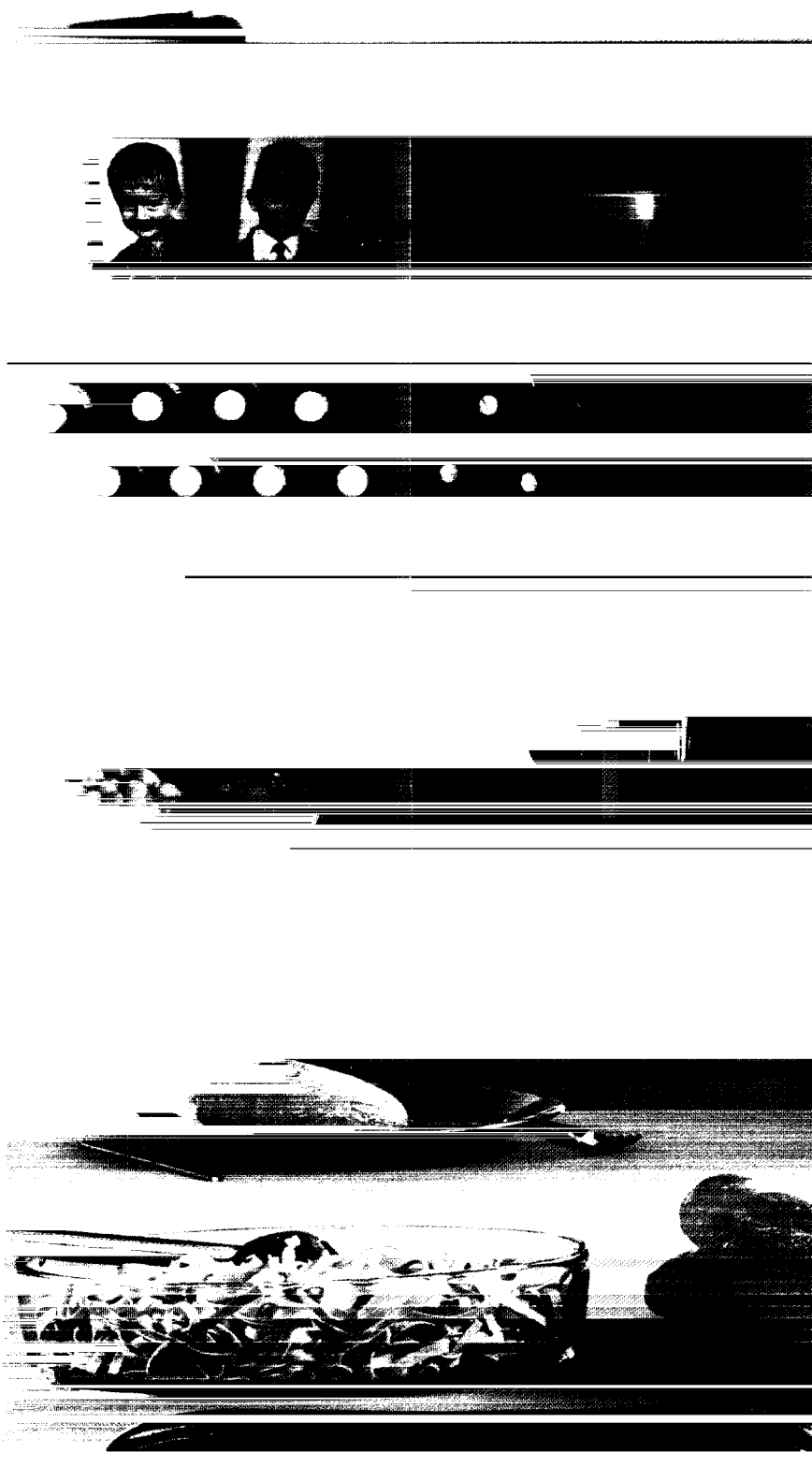
Like the Annual Report, Novozymes' Environmental and Social Report is an important part of our reporting and ongoing dialogue with our stakeholders.

The concept of sustainable development sets an agenda for Novozymes. Our aim in the Environmental and Social Report is to present our view of our role in a wider context. Novozymes' business is part of many different contexts the world over, including a wide range of social, environmental and financial issues for which we naturally share responsibility.

We are keen to receive feedback, both positive and negative, from all of our stakeholders. Without open dialogue we would be unable to form a clear picture of our business, relate to it and develop as a modern company.

The Environmental and Social Report 2001 documents how we run our business in a number of areas – our overall management system, employee job satisfaction, human rights and the environment. The report is published in April 2002 and will be available at: www.novozymes.com

Report



THE NEW YORK TIMES MAGAZINE

THE NEW YORK TIMES MAGAZINE

THE NEW YORK TIMES MAGAZINE

Report

CEO statement	4
Financial highlights	6
World leader in enzymes	8
Report of the Board of Directors	10
Stronger growth through new strategic initiatives	14
We work for Novozymes	18
Success for environmentally friendly feed enzyme	20
New products to bring growth in the detergent industry	24
Sustainable octane counts	28
Healthier margarine thanks to new enzyme	32

"We will continue to expand our current position as the world leader in enzymes to ensure future growth in this field. In addition we will select new fields that match our technology and competencies and thus gradually expand into other areas of the biotech market"

Sustainable growth

Our first year as an independent company was characterised by falling stock markets around the world and a slowing economy in the USA, Asia and Europe. Novozymes' sales of feed enzymes grew faster than expected, whereas sales of detergent enzymes did not meet the expectations for the year.

Nevertheless, the challenging year of 2001 ended well for us: Novozymes was among the six KFX companies on the Copenhagen Stock Exchange to see an increase in share price during 2001. Our share price outperformed the Danish KFX index by 20%. We met our financial targets, and we had enough cash to finalise two share buy-back programmes worth approx. DKK 435 million in total, to buy Sybron Biochemicals, now Novozymes Biologicals, and to increase our dividend to shareholders.

Belief in the future

Going forward, I expect our business to build further on our current position as the world leader in enzymes and to use this position to ensure continued sound growth in this field. We will continue to be the first to develop new enzyme products and we will continue to optimise our processes to protect our competitiveness, as we have done over the past many years. I also have great expectations of the plans to exploit our technology platform by moving into the pharmaceutical field. We will select new fields that match our technology and competencies and thus gradually expand into other areas of the biotech market – while also further strengthening our technological position.

The positive experience last year of integrating Novozymes Biologicals, our first acquisition, into our existing business has strengthened our confidence in future acquisitions.

In 2002, we expect our detergent enzyme sales to be revitalised by the introduction of several technically innovative products. Technological innovation is increasingly important for growth in the years to come. But technology is not enough in itself. Growing our business requires additional abilities: an intimate knowledge of market needs, contact with partners who are ready to use the new technologies in their processes, and skill in launching innovative technologies. Important factors in this regard are the skills and dedication of our employees. This is why we have introduced a

share option programme for all employees to ensure that the company's success is shared with the employees.

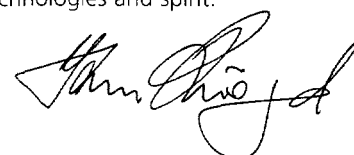
The importance of trust

Launching technologies that are new and not broadly understood requires that our customers – indeed, all our stakeholders – have a high degree of trust in us as a company. Just a few examples of the trust that others have shown in the past year:

- Novozymes received the Brazilian ecological award "Green Wave" for a simple but effective way of treating solid industrial waste and discharging it in a controlled way. The award programme was started in 1992 as a result of the Rio Conference.
- Novozymes scientists were honoured by the invitation to make a presentation at a conference on sustainable development in agriculture, sponsored by the Chinese government, the United Nations, the World Bank and others.
- Novozymes received the US Presidential Green Chemistry Challenge Award 2001. The award recognised Novozymes for designing an enzymatic process for treating cotton textiles that provides an economical and environmentally friendly alternative to the chemical-based products commonly used in the textile industry.

Such activities show the significance of Novozymes' work for a broad variety of stakeholders around the globe. To reach those stakeholders, Novozymes will publish its own Environmental and Social Report this spring. The report will describe the environmental and social aspects related to our company. We report on how we are progressing towards specific goals within these areas. In addition, we are considering and planning how to report in the future on knowledge resources such as patents, employees, education and IT systems, as knowledge drives much of our growth.

Novozymes' first year as an independent company unfolded in a world that is becoming ever smaller, while its contrasts are becoming ever greater. With this backdrop in mind, I believe even more firmly in the importance and promise of Novozymes' technologies and spirit.



Steen Riisgaard, President and CEO



highlights

Key figures 2001

Turnover: DKK 5,271 million

Operating profit (EBIT): DKK 904 million

Net profit: DKK 602 million

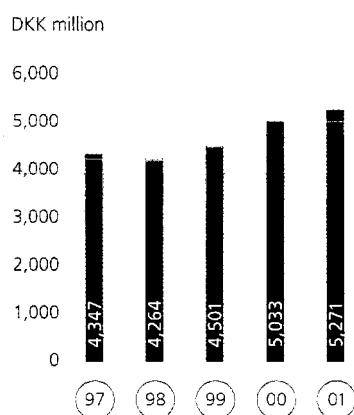
EBIT margin: 17.2%

Return on invested capital (ROIC): 12.0%

See also the Summary of the Novozymes Group on page 32 of the Accounts section.

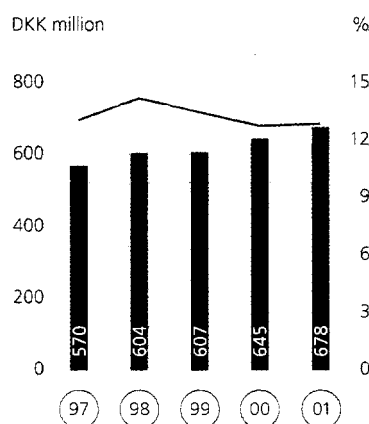
Turnover in 2001 rose by 5% to DKK 5,271 million, partly driven by strong growth in sales of feed enzymes.

- Feed enzymes
- Food enzymes
- Technical enzymes, etc.



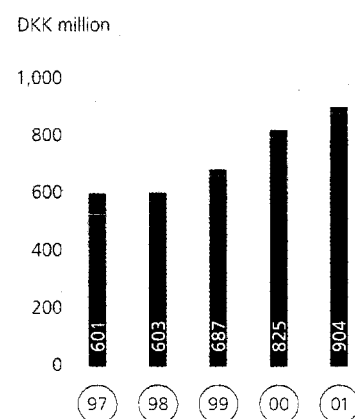
Research and development costs accounted for 12.9% of turnover in 2001.

- % of turnover
- Research and development costs

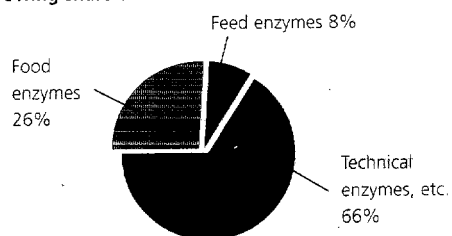


Operating profit rose by 10% to DKK 904 million.

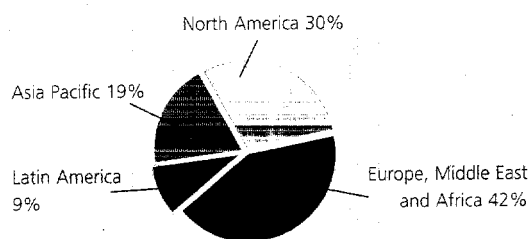
- Net financials
- Tax and minority interests
- Net profit



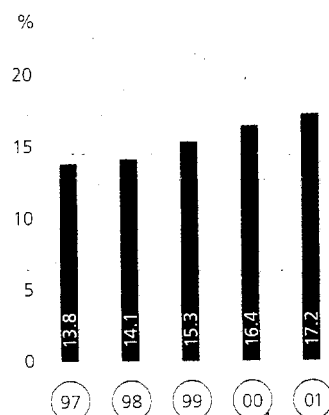
Feed and food enzymes, together totalling 34%, constitute a growing share of total turnover.



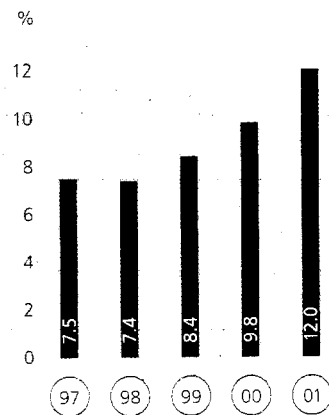
Three quarters of turnover goes to Europe and North America.



Operating profit margin (EBIT margin) rose to 17.2%.

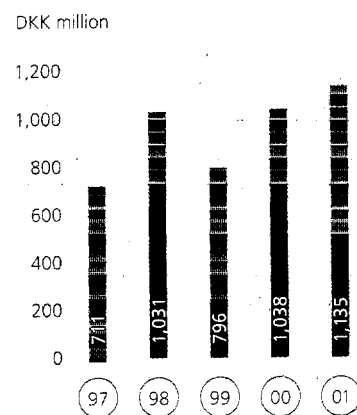


Return on invested capital (ROIC) rose to 12.0%.



Cash flow from operating activities rose to DKK 1,135 million.

■ Net investments
■ Free cash flow





Novozymes

in enzymes

Novozymes is the world's leading enzyme producer, commanding more than 40% of the global market for industrial enzymes, and is a business built on biotechnology. Novozymes has its headquarters in Denmark and its own offices and affiliates in more than 20 countries. We sell enzymes in over 130 countries and have more than 3,400 employees. The company's B shares are listed on the Copenhagen Stock Exchange.

Sustainable solutions

Enzymes are used to make a wide range of different products, or are a direct part of the finished products. Examples are detergents, animal feed, bread, wine, fruit juice and textile finishing. Enzymes offer environmentally friendly solutions for industry and agriculture. Enzymes can often replace traditional chemicals and additives in production processes, and they can help to save water, energy and other raw materials. For example, adding enzymes to detergents allows laundry to be washed clean at 30°C rather than 60°C and thus saves vast amounts of energy. In the longer term we will probably find enzymes that will enable people the world over to do their washing in cold water and so save even more energy. Using enzymes in animal feed improves the animals' digestion and reduces the release of phosphates into the environment.

Enzymes are found naturally in all living things – plants, animals and the human body. Novozymes' enzymes are produced using nature's own resources, with the help of fungi and bacteria, and are biodegradable. We like to think of enzymes as nature's little helpers.

New strategic initiatives to boost growth

In 2001 Novozymes made the decision to venture beyond its traditional enzyme business. Through acquisition of new businesses and new initiatives in the pharmaceutical field the group's long-term goal is to generate annual sales growth in excess of 10%, with 8-9% coming from the existing enzyme business and the rest from new initiatives. (Read more on page 14.)

In June 2001 Novozymes acquired Sybron Biochemicals* (now Novozymes Biologicals), thereby adding a range of new environmentally friendly products to the Novozymes portfolio. However, enzymes for industrial applications will remain our core business. (Read more about our strategy and new focus areas on pages 14-17.)

Based on biotechnology

Novozymes has built its business on innovation and biotechnology and has a research organisation with almost 700 employees in China, Denmark, Japan and the USA. The group ploughs 11-13% of its net turnover back into research and development each year and uses state-of-the-art technologies to develop a steady flow of new enzyme products. We believe that countless new enzyme applications remain to be discovered and that Novozymes has what it takes to identify and exploit the opportunities they present.

Extensive production facilities

Novozymes boasts extensive production facilities. Having worked with biotechnology and enzymes since 1941**, we now have production plants in Brazil, China, Denmark, Switzerland and the USA employing around 1,700 people



and producing many thousands of tonnes of finished goods each year for customers all over the world. Our plants meet stringent environmental standards and hold ISO 14001 certification, and we strive constantly to find new ways of improving our environmental performance. We prioritise an ongoing dialogue with the outside world on environmental issues and bioethics, and we publish an environmental and social report each year.

Leading the way in new areas

Novozymes is leading the way in areas like e-commerce and e-learning (PC-based training) for customers and employees. In 2001 Novozymes was one of the first large Scandinavian companies to launch a share option scheme for all of its employees. The scheme was devised as a way of sharing the company's success with the workforce and ensuring that shareholders, management and employees share the same goals, as well as a tool to attract and retain employees.

Highlights of 2001

2001 was a satisfactory year for Novozymes' business. Despite fierce competition in the largest and most important market – enzymes for the detergent industry – and the general slowdown in the global economy, Novozymes managed to attain the overall financial targets set for the year.

Novozymes' markets are currently divided into three areas: technical enzymes, etc. (including detergent enzymes) and microorganisms, animal feed enzymes and food enzymes.

The year brought strong growth in sales of feed enzymes and a good increase in sales of food enzymes. Sales of

detergent enzymes were not as strong as anticipated, but sales of other technical enzymes, etc. were generally satisfactory.

One of the highlights of the year was the award of a grant by the National Renewable Energy Laboratory under the US Department of Energy for the development of enzymes for the production of fuel ethanol. (Read more on page 28.)

We launched seven new products in 2001. We expect to continue to introduce six to eight new products each year. ■

An award-winning company

Novozymes received numerous accolades in 2001, most of them for its environmental performance. They included:

- The Presidential Green Chemistry Challenge Award from the US Environmental Protection Agency for the textile finishing enzyme product BioPrep®
- Prize from Dansk Energi for the most energy-efficient company
- Membership of the prestigious National Environmental Performance Track, which rewards companies in the USA for protecting the environment
- First place in the Dow Jones Sustainability Index
- The Danish E-commerce Prize
- The Danish financial newspaper Børsen's Annual Report Prize for best annual report

* Sybron Biochemicals was a division of Sybron Chemicals, part of the Bayer group.

** Novozymes was demerged from Novo Nordisk and listed on the Copenhagen Stock Exchange as an independent company in November 2000.

for Novozymes

In its first full year as a separate company Novozymes achieved financial results that meet the expectations stated at the beginning of the year.

Operating profit was DKK 904 million. The operating profit margin rose to 17.2% from 16.4% in 2000. Profit before tax and net profit were respectively DKK 871 million and DKK 602 million in 2001, up by 24% and 25% against 2000. Sales in 2001 totalled DKK 5,271 million, an increase of 5% from 2000. Measured in local currency the increase was also 5%, since exchange rate fluctuations had only a weak negative impact on sales growth.

Sales growth was influenced positively by strong growth in sales of food and feed enzymes, while sales of detergent enzymes were lower than in 2000. Nonetheless, operating profit developed as originally expected. The reasons include a significant improvement in productivity in certain areas. "Financial discussion" on pages 4-6 of the Accounts section presents further information on Novozymes' results for 2001.

Highlights of the business year


In January 2001 the US Department of Energy donated Novozymes Biotech, Novozymes' US-based R&D unit, up to USD 14.8 million for the development of enzymes for the production of fuel ethanol.

In June Novozymes acquired Sybron Biochemicals, now Novozymes Biologicals. This was Novozymes' first acquisition, and the integration process was satisfactorily achieved.

In August the company published its new strategy, which includes a number of initiatives in the pharmaceutical area. We also established a number of new focus areas within our existing enzyme business. (See page 17.)

Qualified for the KFX index

With around 40,000 shareholders, the attention of more than 15 equity analysts, and continued qualification for the KFX index, Novozymes has also made a fine start from a shareholder perspective.



"Novozymes' Board of Directors and Executive Management welcome the recommendations for corporate governance, and we have already developed systems to ensure that they are addressed in practice in a sound, documented manner"

Henrik Gürtler, Chairman of the Board of Directors

The share price officially closed 2001 at DKK 168.50, an overall increase for the year of 6%, compared to a 14% drop in the KFX index in the same period.

Good Corporate Governance

In December the Nørby committee appointed by the Danish Ministry for Business and Industry published a number of recommendations for good Corporate Governance. The recommendations were drawn up by a group of Danish business leaders called the "Nørby committee," and were immediately endorsed by the Copenhagen Stock Exchange.

Novozymes' Board of Directors welcomes the 31 recommendations that relate to overall perceptions, as well as more concrete operational guidelines for corporate management, and for interaction with shareholders and other stakeholders. We have developed systems to ensure that the recommendations are considered and put to practical use in our company.

Improved, more balanced commercial base

With sound growth in food and feed enzymes, and a moderate decline for technical enzymes, Novozymes has


achieved greater balance in its commercial base. The acquisition of Novozymes Biologicals, and the new initiatives in the pharmaceutical field, will further strengthen our efforts for greater differentiation of our business profile, and thereby also a more appropriate risk profile.

New products and partners

Novozymes introduced seven new products in 2001, among them Lipopan® F for the baking industry. A number of long-term sales contracts with major customers were established, which will help to ensure stable sales growth in the coming years.

New share buy-backs and holdings of own shares

The Board of Directors of Novozymes A/S has adopted a resolution to buy back own shares in the market for maximum DKK 200 million. The purchased shares will be included in the holding of own shares to cover option schemes. As of 31 December 2001, Novozymes' holding of own shares (treasury shares) comprised 2,550,000 B shares, equivalent to 3.4% of the total number of shares in issue. ►►



The Novozymes shares and options held by the Board of Directors and Executive Management are unchanged from the third quarter of 2001.

Dividend

The Board of Directors will propose to the ordinary annual meeting of shareholders on 20 March 2002 that the dividend rate for 2001 be set at DKK 2.00 per share of DKK 10. This corresponds to an increase of 21% against 2000. No dividend will be paid on the company's holding of own shares.

Pending litigation

On 22 August 2000 a district court in São Paulo, Brazil, ruled on the confiscation of Novozymes' assets in Brazil. After Novozymes appealed the ruling, on 11 April 2001 the Court of Appeals in São Paulo found in favour of Novozymes. The case has thus been closed.

In November 2001, Danisco A/S brought an action before Det Danske Voldgiftsinstitut (Copenhagen Arbitration), claiming that Novozymes had unrightfully appropriated certain lipase-related inventions in connection with a co-operation project between the companies that has now been concluded, and inserted these inventions in its own patent application. It is Novozymes' opinion that the legal action is based on a number of misunderstandings, and moreover, Novozymes has made a counterclaim for damages for any detrimental effects on sales of Lipopan® F.

Events occurring after the close of the financial year

Novozymes and the Dutch company DSM entered into a licence agreement in January, whereby DSM gives Novozymes a global, partly exclusive licence, and other rights to DSM's phytase patents. This agreement terminates

a number of legal actions in several countries concerning infringement and the validity of DSM's phytase patents. All current legal disputes concerning these patents have thus been concluded. Novozymes can now concentrate fully on utilising the full potential of this rapidly expanding business area.

At the beginning of January 2002, Genencor International, Inc. took out an injunction against Novozymes for infringement of certain patent rights belonging to Genencor through the sale of Carezyme® to e.g. Procter & Gamble. Novozymes does not consider the patents to have been infringed.

Outlook for 2002

In 2002, sales increases are expected for all product areas.

Technical enzymes, etc., including enzymes for the detergent industry, are expected to grow by around 5%, food enzymes by 10-15%, and feed enzymes by 15-20%.

The planned growth in sales of detergent enzymes is expected to be realised in the second half of 2002, when sales of new products are estimated to have a positive impact.

Assuming that exchange rates remain at current levels for the rest of 2002 – especially USD, JPY and BRL against DKK – the increase in net turnover in 2002 is expected to be 7-8% against sales in 2001.

The development in sales is supported by Novozymes' expectations to introduce six to eight new products during 2002.

The level of expenses in 2002 will be affected by a number of special conditions, including the costs of the aforemen-



tioned settlement with DSM. The work of implementing the new strategy that was communicated on 8 August 2001 will also contribute to higher expenses than in 2001. This work includes ongoing investigation of potential new cooperation partners and acquisition candidates, and the continuation of the pharmaceutical projects that have already been launched.

Excluding the costs of the DSM settlement and the new activities, this corresponds to an increase of 9-11% in operating profit.

Prices for significant raw materials are expected to rise. As in previous years, further productivity and yield improvements in production are planned.

Despite the aforementioned development in costs, the operating profit is expected to increase by 7-8%.

The operating profit margin is expected to be maintained at the level of 17%.

In order to minimise the risks of declining exchange rates, especially the net exposure to USD and JPY, again in 2002 Novozymes has hedged USD and JPY to cover 12 months of the current year's expected net cash flows in USD and JPY. Depending on the actual development in exchange rates over the year, the loss or gain on these hedging transactions will affect either operating profit or net financials. At the current level of exchange rates this entails a foreign exchange gain which, all else being equal, will improve net financials for 2002. As a consequence, net financial expenses are expected to lie at between DKK 55 and 65 million in 2002.

The effective tax rate is expected to be 30%.

On this basis, the profit after tax is expected to increase by 5-7% from the year 2001.

The Group's investments in fixed assets are expected to fall short of the depreciation for the year. 2002 will thus be the third consecutive year of investments below depreciation.

The free cash flow is expected to be at the same level as in 2001, in both cases excluding acquisitions.

The Group's return on invested capital, measured as ROIC, is expected to develop positively from the level in 2001, when ROIC was 12.0%.

Long-term financial targets

The long-term financial targets for the company set in 2000 are maintained:

- Annual growth in operating profit of minimum 10%
- An operating profit margin at the level of 17%
- Return on capital (measured as ROIC) of minimum 15% p.a.

Forward-looking statements

The above sections "Outlook for 2002", the Novozymes report, and Financial discussion contain forward-looking statements. Forward-looking statements are by their very nature associated with risks and uncertainties that may cause actual results to differ materially from expectations, including unexpected developments in the international currency, bond and money markets, market-driven price decreases for Novozymes' products and the introduction of competing products in Novozymes' core areas. ■

Stronger growth through new strategic initiatives

In August Novozymes decided to supplement its existing strategy with a number of initiatives outside its traditional enzyme business. The goal is to secure long-term annual sales growth in excess of 10%.

Besides enzymes for industrial applications, Novozymes will be focusing on two areas: acquisitions and pharmaceuticals.

At the same time the organisation is being geared up to work especially fast and effectively on the development of new enzyme applications in selected focus areas. This is being achieved by integrating research and product development with marketing in these areas to create special teams. (Read more about the selected focus areas on page 17.)

Enzymes for industrial applications will remain Novozymes' core business and will continue to attract some 90% of our research resources.

The new strategy has three focus areas:

- Enzymes for industrial applications (the existing business)
- Acquisitions related to Novozymes' core expertise
- Ventures in the pharmaceutical field

Alliances to pave the way into pharmaceuticals

The work on new ventures in the pharmaceutical field is concentrated largely at Novozymes' research unit in Davis, California, and in Denmark. The projects in question are being undertaken in partnership with other companies and research institutes. Novozymes will make its money through the sale of licences, contract manufacturing and, in one case so far, the production of fermentation products in-house. The company is currently working on the following four pharmaceutical ventures: low-allergenic proteins, peptides to treat infections, contract manufacture of pharmaceuticals, and hyaluronic acid.



1 Low-allergenic proteins

Many modern pharmaceuticals are based on proteins, but proteins can cause allergies. Novozymes has developed a unique technique that can identify and change potentially allergenic proteins and so reduce the risk of allergic reactions from pharmaceuticals.

2 Peptides to treat infections

It is becoming increasingly difficult to fight harmful bacteria and other microorganisms because they are gradually developing resistance to current forms of treatment. Novozymes is working on finding and further developing new peptides (small proteins) that can be used to treat infections.

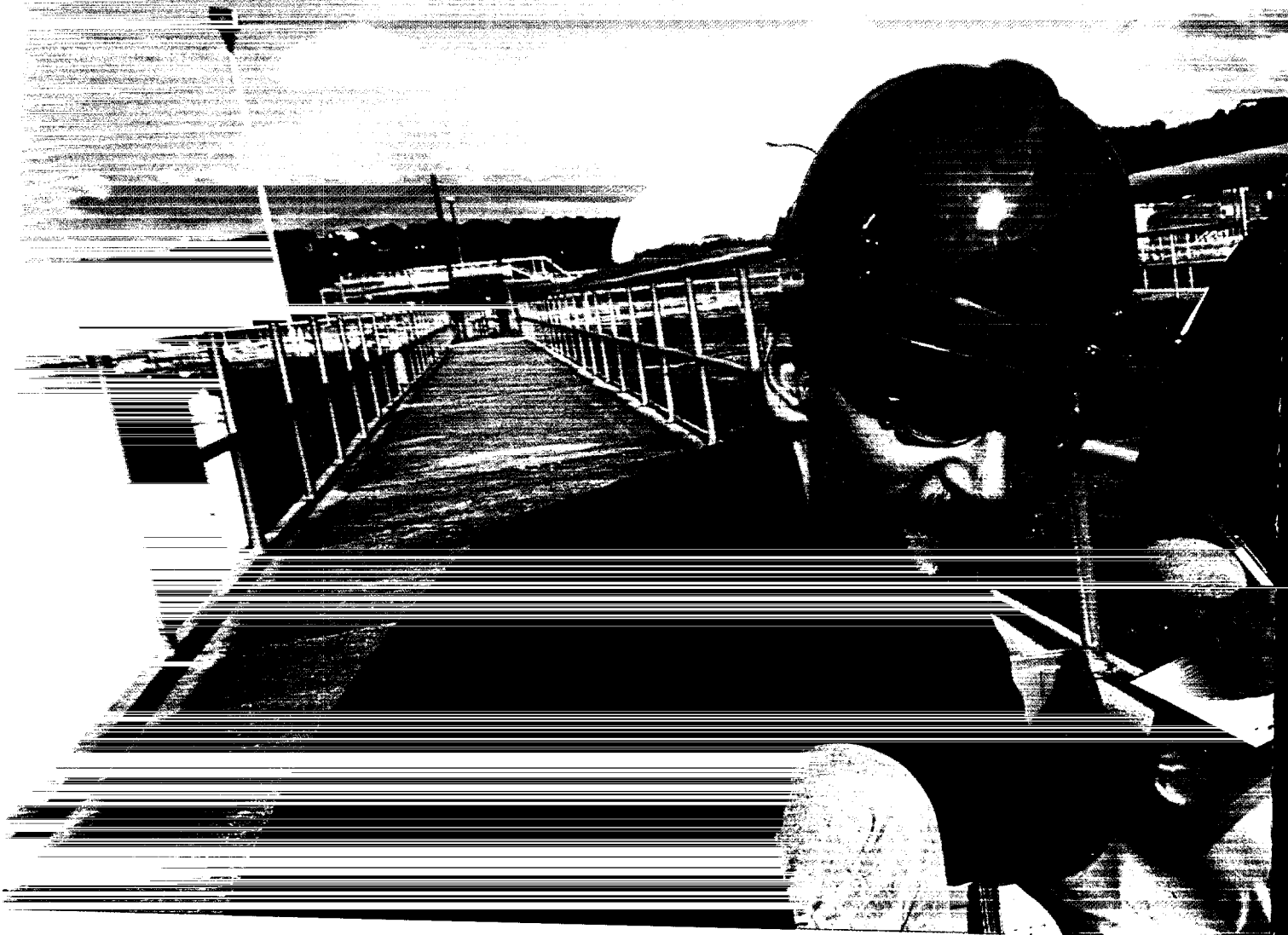


3 Contract manufacture of pharmaceuticals

Many protein-based pharmaceutical products are currently produced by cultivation of cells taken from mammals, but this cell technology is extremely expensive, slow and difficult. Novozymes hopes to replace it with a method based on the cultivation of microorganisms and has embarked on a research project to evaluate this possibility. If successful, it will result in a production method that is faster, easier and more economic.

4 Hyaluronic acid

Novozyymes has signed an agreement with the US company Hyalose LLC, which has found the genes that allow efficient production of hyaluronic acid. This natural lubricant is used extensively in the treatment of arthritis and during lengthy surgery, such as eye operations. If these genes can be made to work in Novozymes' microorganisms, it will be possible in future to produce hyaluronic acid using an advanced microbial method rather than using cocks' combs or streptococcus bacteria as is the case today.



From Sybron Biochemicals to Novozymes Biologicals

US company Sybron Biochemicals was acquired by Novozymes in June 2001 and has now been renamed Novozymes Biologicals. This was the first step in Novozymes' strategy of acquiring businesses that match its core expertise. Like Novozymes, Biologicals built its business on microbiology and environmentally friendly alternatives to conventional chemicals. The company has around 100 employees, most of them in Roanoke County, Virginia, and develops and manufactures microbial-based products for industrial, household and agricultural use. Examples include industrial wastewater treatment products, cleaning and odour-control products, and drain build-up removers for institutional and household use. The greatest growth is expected to come from Biologicals' Green Releaf® product series, which includes a new product to enhance the growth and disease-resistance of turf on golf courses.

"Novozyymes Biologicals is a perfect match for our vision of supplying environmentally friendly biological solutions," says Novozymes' CEO, Steen Riisgaard. "Not only are we expanding our product portfolio to include biological products other than enzymes, but we have also spotted a whole series of potential synergies with our existing business."

In 2002 Novozymes will begin building new research and administration facilities for Biologicals at the Roanoke County Center for Research & Technology. This project will run for more than five years.

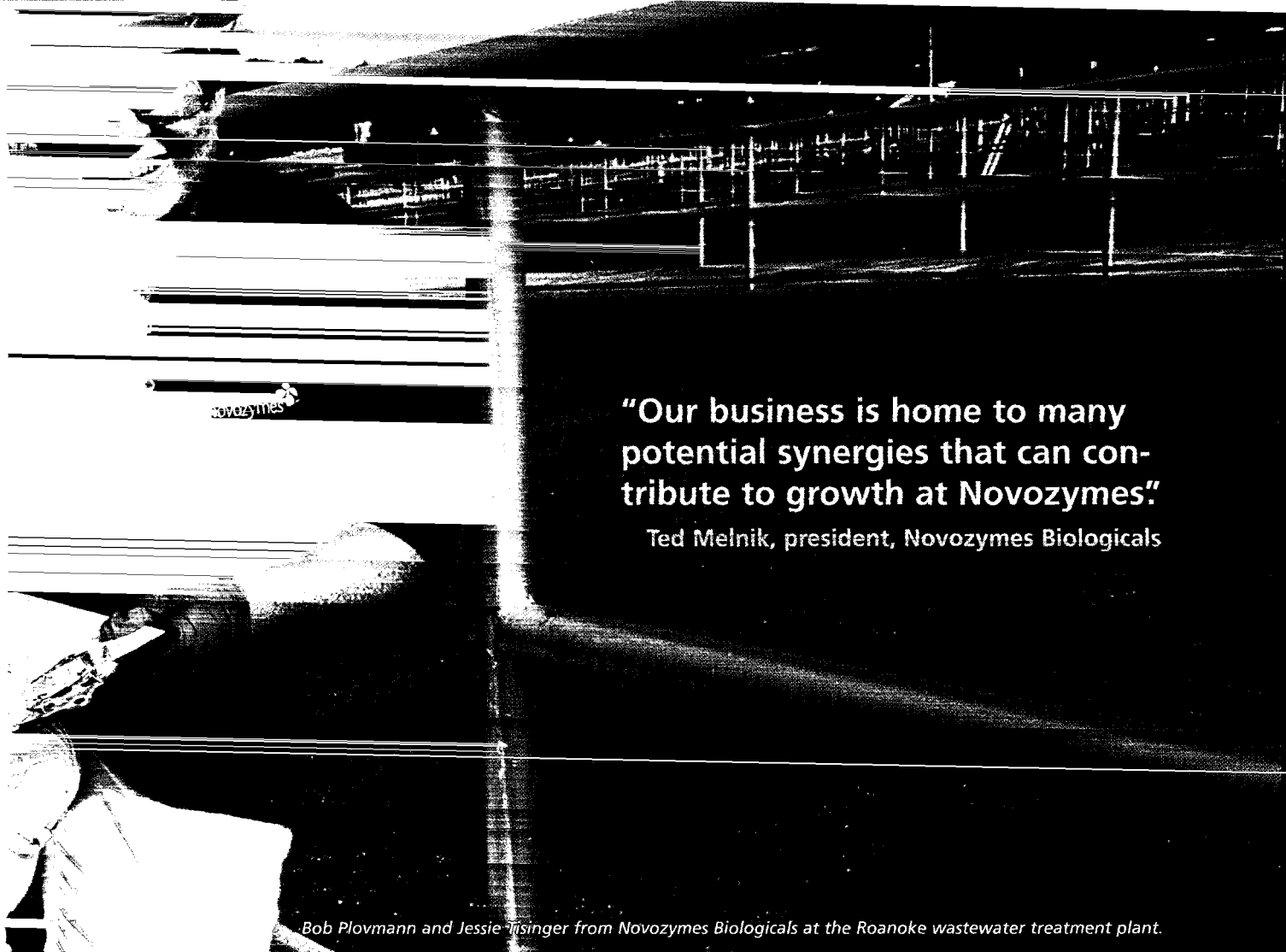
Acquisition strategy

Novozyymes will be actively on the lookout for acquisition targets in the years ahead. The companies we are interested in must strategically fit Novozymes' existing technology base in e.g. fermentation technology, and furthermore be attractive financially, or have the potential to become so in the short term.

Dialogue and partnerships

Dialogue and partnerships lie at the heart of Novozymes' strategy. One example is our successful strategic alliance with the Roche group's Vitamins and Fine Chemicals Division to develop and market feed enzymes. It is in fact typical of Novozymes that our products are developed in close collaboration with customers.

We will also be focusing on partnerships when developing our new strategic focus areas: it is largely through cooperation with researchers and companies outside Novozymes that our strategy for the pharmaceutical field will be realised.



"Our business is home to many potential synergies that can contribute to growth at Novozymes"

Ted Melnik, president, Novozymes Biologicals

Bob Plovmann and Jessie Hisinger from Novozymes Biologicals at the Roanoke wastewater treatment plant.

New focus areas bring innovation and marketing together

Some of Novozymes' future growth is to come from brand new enzyme applications. In 2001 we decided to focus on a handful of selected areas by organising some of them in a new way to create independent teams. Here employees from research and marketing work closely together in order

to develop new enzymes and get them onto the market quickly. In many ways the teams are like small businesses within the company. They will play an important role in developing enzymes for new areas, and employees have shown great interest in this set-up. So far teams have been established within the following areas: Oils & Fats, Pulp & Paper, Processed food and Enzyme applications in Asia. ■

Selected pipeline products

Some of these R&D projects are expected to lead to new enzyme products already from 2002.

Industry	Enzyme type	Application
Detergents	Lipase	First wash removal of fatty stains
	Protease	Improved removal of protein stains and higher enzyme stability
	Cellulase	Improved care of cotton fabric
Fuel ethanol	Cellulase	Degradation of cellulose in agricultural by-products (biomass) into fermentable sugars for fuel ethanol production
Pulp & Paper	Cellulase	Improvement of fibre characteristics and reduction of impurities, etc. in paper processing
Baking	Lipase	Improved bread quality and potential emulsifier replacement
Beverages	Laccase	Stabilisation of brewing process and juices
Animal feed	Phytase	More competitive phytase for increased nutritional value in pig and poultry feed and reduced phosphate emissions from animal production
Various	Haloperoxidase	Combating living microorganisms, bacteria and spores

The record for launch of a new enzyme product is 26 months from first concept, followed by research, development and production, to first sales.



We have to get it right

"The Internet has really opened up new opportunities for working more closely and in real dialogue with customers, but we have to get it right. While we used to deal primarily with the purchasing department, we can now use e-commerce and e-learning to work with departments right across a customer's organisation – we just need to be able to offer the relevant know-how."

Knud Juel Jensen, head of Business Operations' Business Academy

Supporting openness

"It's quite unique that the management supports open debate. They really believe that together we can create the right solutions. I was honestly surprised the first time I saw the staff magazine, where constructive criticism was put forward quite openly. Good decisions require open communication."

Ann Jenkins, research engineer, Pilot Plant, Franklinton, USA

Dynamic frontrunner

"Everyone in production took up the challenge to map our energy consumption and carry out energy-saving projects. We implemented energy management and now have the tools we need to save energy in the long term. This resulted in Dansk Energi recognising us as Denmark's most energy-efficient company in 2001."

Per Garnov, head of Technical Support, Site Kalundborg/Bagsvaerd

We work for Novozymes

Positive signal

"The employees were enthusiastic about our share option scheme. I've even noticed that I take more of an interest in whether things are going well for the company these days. I'm more aware that I play a role in how well the company performs. I think everyone is."

Pernille Lind Olsen, executive assistant, Human Resources

In balance with nature

"Our constant endeavour is to improve the balance between technology and nature. So we keep a close eye on wastewater via process controls and ongoing technical analyses. I really make sure that the wastewater system is always in good order."

Sidnei Saldanha, laboratory technician, Brazil

Important to lead the way

"It was a wonderful surprise to receive the prize for the best annual report for 2000. It was a great day for everyone who had worked to make the annual report as informative as possible. This year sees us leading the way in applying the new Danish Company Accounts Act. It's important for me to work for a company that is at the cutting edge."

Gurli Smed, group economist, Finance





Greeting the robotic pig

"I was a student in the research lab where the first production strain for phytases was discovered, and have been working with the feed enzyme ever since. I'm proud to work on a product that benefits the environment. My responsibilities include looking after our robotic pig, which we use to test new variants, and I make a point of greeting him at the beginning of every day."

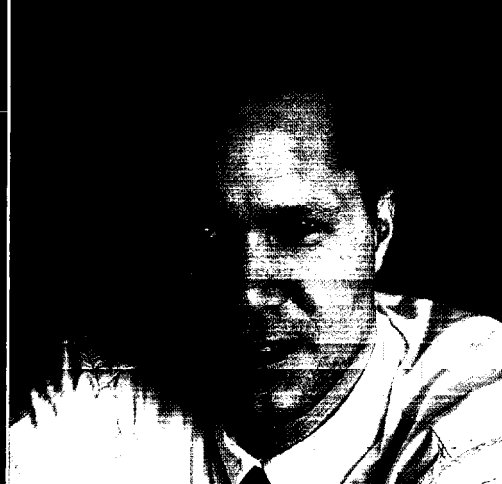
*Berit Ring, laboratory technician,
Feed Enzymes*



Difficult balance

"I head a department of 12 scientists and assistants who work on new compounds that could potentially be used either in industrial processes or as pharmaceuticals. 2001 was an exciting year with plenty of challenge as Novozymes is the newcomer to the biotech research environment, and since our research is even more sharply focused than before. I have learnt how to balance my working life with my family life. My job involves travelling, and fortunately, Novozymes' staff policies are family-oriented and provide the flexibility I need to keep things on course."

*Debbie Yaver, Novozymes Biotech,
Davis, California*



We turned things on their head

"We have adopted a new approach to one of our major detergent customers by taking a long hard look at our organisation and analysing whether we can do things better – step by step. It was an exciting and, at times, frustrating process until we could see that it was beginning to yield results. We have now managed to come up with solutions that ensure that our products and logistics are better tailored to the customer's long-term needs."

*Peter Rosholm, account manager,
Detergents/large customers*

Tools packed and ready

"We have developed a good package of tools to help textile mills switch from traditional chemicals to enzymes. We can now offer solutions that benefit both the environment and mill owners. The fact that we received the Presidential Green Chemistry Challenge Award for BioPrep® serves to highlight the great potential of this product."

*Thomas Vollmond, marketing manager,
Textile Enzymes*

A good place to be

"When we were acquired by Novozymes, it was important to me that this was a company with strong values. I could see immediately that this would be a good place to work. We couldn't have wished for anything better in terms of opportunities to grow our products and technologies"

*Claudia Kamel, administrative employee,
HR, Novozymes Biologicals, USA*

Dedication and investments

"When the announcement came last summer I was one of the first to say that this was the best that could happen now that our ownership had to change. The decision to invest in new buildings for Biologicals emphasises Novozymes' dedication to developing the new business area of microorganism applications."

*Jeff Howard, product manager,
Agricultural Products Group,
Novozymes Biologicals, USA*



Success for environmentally friendly feed enzyme

Novozymes' enzyme phytase for pig and poultry feeds is becoming increasingly popular in the farming world and accounted for the bulk of the growth in sales of feed enzymes in 2001.

Phytase increases an animal's ability to absorb a feed's natural content of phosphorus, which is an important nutrient, especially for the bones. This also means less phosphorus is released into the environment.

"The enzyme is an environmentally friendly and cost-effective alternative to supplementing feed mixes with inorganic phosphorus," explains Lars Dalgaard Andersen, director of Novozymes' Feed Unit. "Our phytase reduces the release of phosphates into the environment by an average of 30%."

Dutch pig breeders were the first to begin using feed enzymes in the mid-1990s to bring down the accumulation of phosphates in agricultural land, lakes and waterways. A number of other EU member states and some states in the USA have been moving in the same direction.

Regulation

The attention given to the problem by both the authorities and environmental organisations, including calls for regulation, has led farmers in many countries to start reducing the amount of phosphorus added to feed mixes and instead use the feed enzyme phytase.

The legislation in this area has yet been passed in Denmark but growing sales of phytase in this country over the last couple of years bear witness to the fact that Danish farmers too are becoming increasingly aware of environmental issues and that farmland cannot keep on absorbing large amounts of phosphates.

Diseases boost phytase sales

One factor contributing to the rapid growth in the use of phytase has been fear of mad cow disease

(BSE), with the EU and more recently Japan banning the use of meat-and-bone meal in feeds for pigs and poultry. Supplementation with meat-and-bone meal was previously an inexpensive way of ensuring that feeds

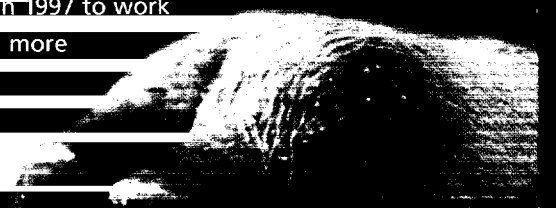
contained the necessary amount of phosphorus. Now producers have taken the opportunity to start using phytase when formulating new feed mixes free from meat-and-bone meal.

"The plant material in animal feeds naturally contains both phytase and the phosphorus that is so vital for the bones," explains Andersen. "Unfortunately natural phytase levels vary widely and the plant phytase in factory-produced feed mixes is destroyed completely when the feed is heat-treated to prevent infection with salmonella and other bacteria. By adding microbial phytase we can bring about uniform and adequate levels of phytase, so ensuring that livestock can absorb sufficient phosphorus."

Important alliance

On 1 January 2001 Novozymes entered into a worldwide strategic alliance with Hoffman-La Roche's Vitamins and Fine Chemicals Division. The idea behind the alliance is to share the role of pioneer and driving force in the development of new applications for feed enzymes. The alliance comes as a natural extension of the partnership that Novozymes and Roche entered into in 1997 to work

on a new and more competitive phytase. ►►



**"Our phytase reduces the release of
phosphates into the environment by
an average of 30%."**

Lars Dalgaard Andersen, director, Feed Unit



sound finances and	source. At the same time, produc-	key role to play in feed optimisa-
environmental performance	tion costs have to be driven down	tion – to ensure sound finances and
British farmers are keen to reduce	to ensure future competitiveness,	reduce environmental impacts."
environmental problems at their	Enzymes, including phytase, have a	

the sales successfully increased their market share	We always continue to optimise all our production
during the year under the RONOZYME® brand and	processes and ensure that they are financially robust
now command over a third of the global market for	and competitive. The parameters we are working on
feed enzymes.	include raw materials, production technology and
	processes, including fermentation and finishing, con-

Production optimised

The constant rise in demand for phytase during the	control and quality management systems, and employee
year asked a great deal of Novozymes' production	training. The constant optimisation of production is
facilities, which had to produce larger volumes in a	one important reason for Novozymes' high cash flow,
shorter space of time than originally anticipated.	as investment in production facilities has been at the
	level of depreciation charges. ■



The constantly increasing demand for phytase in 2001 made high demands of staff in production and packing.



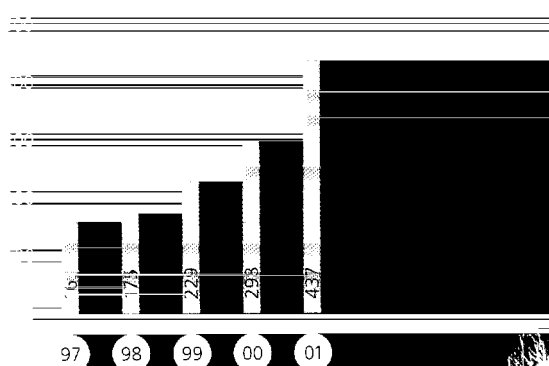
Peter Gæmelke

Danish Agricultural Council

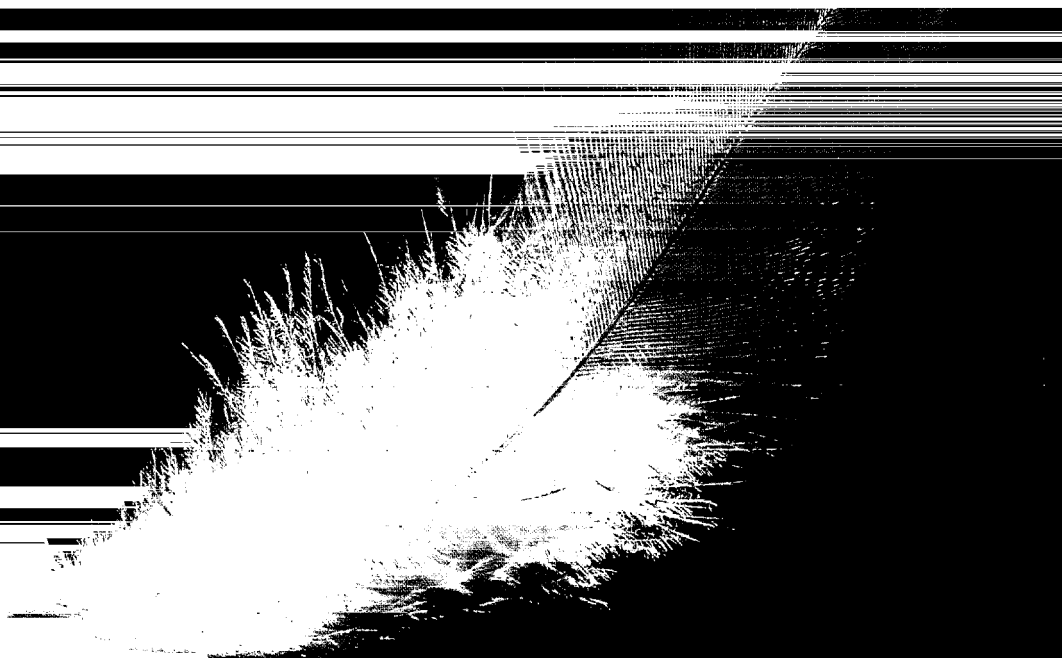
Sharp increase in sales of feed

enzymes in 2001

in million



average annual growth over five years



Feed enzymes in 2001

The feed enzyme business area performed very well

in 2001, with sales up by 47%. This strong growth

is due especially to the breakthrough for the

feed enzyme phytase.

position was strengthened when the EU and Japan

introduced bans on the use of meat-and-bone meal

in animal feed. The partnership with Roche has

proved to be a strong alliance – not only in terms of

phytase but also a number of other feed enzymes, as

Roche has identified and developed a number of

brand new openings in the market.

Enzymes for animal feed is the smallest of Novozymes'

three business areas but was the fastest-growing in 2001.

Phytase accounted for more than half of this growth,

while other feed enzyme products, which, among other

things, help animals to make better use of the raw

materials in their feeds, accounted for the remainder.

Novozymes expects sales of feed enzymes to continue

growing over the next few years, the most important

drivers being the alliance with Roche and phytase's

penetration of the US and Japanese markets.

Phytase for pigs and poultry was a sales success even

before the outbreak of mad cow disease (BSE) but its

in the longer term, growth will stem from new prod-

ucts developed in close collaboration with Roche. ■

New products to bring growth in the detergent industry

Sales of detergent enzymes were not as strong as expected in 2001. Novozymes had anticipated slight growth in the market, but sales were 11% down on 2000.

However, Novozymes is well equipped to generate fresh growth with products that offer new benefits for producers as well as for consumers. We therefore expect to reverse this trend already in 2002.

The most important factor behind the decline lies in sales to Novozymes' two biggest customers, the detergent giants Procter & Gamble (P&G) and Unilever, which are strong competitors.

Market conditions have forced detergent producers to cast a critical eye over their cost structures, including their consumption of raw materials. When it comes to enzymes, trials with alternative detergent formulations have resulted in lower enzyme dosages and new enzyme mixes, leading in turn to lower sales volumes for Novozymes and a general squeeze on prices in the detergent enzyme market.

Novozymes was more reluctant than competitors to drop prices. Developments in Latin America and China also had a negative impact on growth: In Brazil, the Real depreciated, while in China competition from cost-effective non-biological detergents undermined sales of detergent enzymes.

However, increasingly stringent Chinese environmental standards mean that Novozymes is currently in dialogue with producers on increasing the use of enzymes in their detergents as a means of both improving their products and helping the environment.

"2001 showed how sensitive we are in the detergent industry to the challenges faced by our major customers. Their strategy and response to market conditions impact rapidly on our sales," explains Henrik Meyer, vice president, Marketing, Detergent enzymes. "On the other hand, it is also typical of this industry that the launch of brand new products can boost sales, as we saw with the detergent enzyme Mannaway™. So we have high hopes of turning things around with new initiatives in 2002."

Tough competition

Tough competition, especially in the largest enzyme class, proteases, has led to both falling prices and a decrease in market share. One reason sales in 2001 were lower than anticipated was that in many cases

Growing the market

Although Novozymes' leading competitor has gained the bulk of protease sales to P&G, Novozymes is the market leader in the other enzyme classes and in sales of proteases to other customers. We also have excit-

e-learning

customers in the detergent

industry were among the first

to be introduced to Novo-

zymes' e-learning programme."

Larsen-Thomsen, Marketing,

Detergent enzymes



"We have high hopes of turning things around with new initiatives in 2002."

Henrik Meyer, vice president,
Marketing, Detergent enzymes

new product initiatives under way in conjunction
with many of our large customers.

New products in 2002

Here are three of the products that Novozymes ex-
pects to launch in 2002:

Novozymes' goal is not only to win a bigger slice of
the existing market for detergent enzymes, but just as
much to grow the market by creating real value and
innovation. Novozymes will bring about growth by
constantly increasing the value that enzymes add to
detergent products. This will be achieved by including
different types of enzyme in each detergent product
and by launching improved variants of existing en-
zymes. So growth will be generated in two main ways:

- In the short and medium term by developing
enzymes that offer new consumer benefits;
- In the long term by developing enzymes that can
replace other raw materials in detergents.

Executive Vice President, R&D, Per Falholt believes that
Novozymes commands a strong position on both fronts:
"We built up this market from scratch, we have been the
driver of all the major innovations in this market, and
we plan to remain the most innovative enzyme com-
pany around. We're ready to launch a series of really
exciting new products that offer producers more cost-
effective production and consumers cleaner laundry."

During 2002 Novozymes will be introducing a number
of new products for the detergent industry in the key
enzyme classes.

- A new lipase that can remove fats from fabrics in a
single wash. Per Falholt calls it a longstanding
dream to get this product onto the market and
views it as a scientific breakthrough. Until now con-
sumers have had to wash fabrics two or three times
before the detergent lipases could finally get to
grips with fatty stains. A first-wash lipase therefore
offers new benefits for consumers and will be of
great value to producers when positioning their
detergents in consumers' minds.

- A new and more robust cellulase that works better
in detergents containing surfactants than existing
cellulases, so opening the door for a number of
producers that have not previously used cellulases.

- A product capable of stabilising proteases in liquid
detergents. The role of proteases is to break down
proteins found in grass, blood, egg and sweat
stains. However, since enzymes are themselves pro-
teins, proteases have the unfortunate side-effect of
breaking both themselves and other enzymes into
pieces. By stabilising the proteases, we are able to
limit this process. This means that other more ex-
pensive stabilisation methods can be replaced and
that more producers can add proteases to products
that have not previously contained enzymes.

close cooperation selected suppliers is very important, the best consumer benefit in the

Unilever and Novozymes have and means two things: Innovation shortest possible time. Supply chain

worked together for many years on and Supply chain. Innovation is means reducing the overall supply

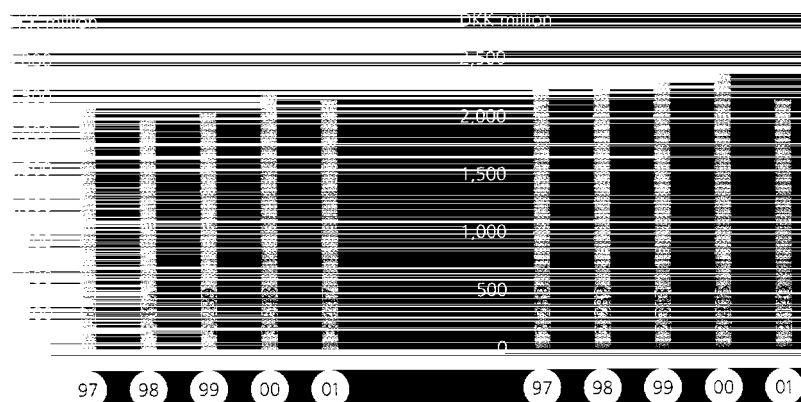
various aspects of the supply and about maximising the opportunity chain cost while at the same time

development of detergent enzymes. for development of the right tech- being able to maintain world class

Unilever close collaboration with nology for the right product and standards of safety, quality and cus-

Reduced sales of technical enzymes,
etc. due to lower sales of detergent
enzymes

Reduced sales of detergent enzymes
due to fierce competition



New products in the longer term

In the longer-term Novozymes would like to replace other raw materials in detergents – indeed it may one day be possible to substitute all of the ingredients in a washing powder with enzymes. However, Per Falholt is keen to stress that it may take long for this vision to come true. Besides enzymes, the main ingredients in detergents include polymers and surfactants that clean and remove dirt, builders that soften the water, and bleach. Whole new markets would open up if Novozymes' enzymes could replace some of these ingredients.

The market of tomorrow

The detergent enzyme market of tomorrow belongs to those who can continue to deliver new benefits for the producer, the consumer and the environment. Thanks to its new products, Novozymes is well-prepared for this challenge. Activities in areas like supply chain management, e-commerce and e-learning are also helping us to forge ever closer links with our customers. ■

Technical enzymes, etc. in 2001

Technical enzymes, etc. range from detergent enzymes, which are the most important application, to enzymes for the following industries: starch, fuel ethanol, textiles, leather, pulp & paper, etc. and industrial microorganisms.

Sales of technical enzymes, etc. decreased by 3% in 2001. The main reason that sales in this market were lower than anticipated was a drop in sales of enzymes to the detergent industry. Most other groups of technical enzymes, such as those for the starch and fuel ethanol industries, demonstrated good performance with healthy sales growth.

Detergent enzymes

The 11% decrease in sales of detergent enzymes was due primarily to fierce competition. Exchange rate movements also had a negative impact as some sales were to areas whose currencies weakened against the Danish krone.

...service. Our supply chain col- objectives of "World Class Supply
...oration with Novozymes is very Chain" and "Simplify."
...strong and continues to deliver
...ential benefit by reducing dupli-
...ation of activities and inventory,
...also supports Unilever's strategic

Sandy Rodger,
Unilever, Laundry
Category VP, Supply
Chain & Technology



Sandy Rodger

Unilever



Novozymes expects sales of detergent enzymes to rise again in 2002.

Other technical enzymes, etc.

Sales of other technical enzymes, etc. grew by 14% in 2001, due in part to the acquisition of Novozymes Biologicals on 1 July.

Sales to the starch industry were satisfactory in 2001, with strong growth from prior year particularly in North America. New products for the starch market helped to generate this growth, which Novozymes expects to sustain in 2002.

The big news of 2001 in the fuel ethanol market was Novozymes' receipt of a research sub-contract from the US Department of Energy to fund a major new research programme. The goal of the programme is to develop enzymes that can be used in the production of ethanol as a substitute for the hazardous fuel additive MTBE. If suc-

cessful, this could lead to a major new market for Novozymes.

Sales of enzymes to the textile and leather industries fell slightly in 2001. This was due partly to the general economic situation in countries like the USA, which has had a negative impact on textile producers, and partly to a decrease in the use of hides as a result of foot-and-mouth disease in Europe. However, the situation improved substantially during the course of the year, especially for the textile industry.

In line with expectations, Novozymes Biologicals' sales rose satisfactorily in 2001. Read more about Novozymes Biologicals on page 16. Novozymes Biologicals develops and produces microbial-based products for industrial, household and agricultural use. Examples include industrial wastewater treatment products, cleaning and odour-control products, and drain build-up removers for institutional and household use. ■

Sustainable

octane counts

In a few years, there is every chance that sawdust, wood chips, straw, corn stalks and other plant residues will be used to produce petrol with a sustainable octane count, to the great benefit of the environment.

Novozymes is currently researching the development of new enzymes for the production of bioethanol (fuel ethanol) that will allow biology to replace environmentally hazardous additives such as MTBE (methyl tertiary butyl ether) in petrol.

The research project is for NREL (National Renewable Energy Laboratory) under the US Department of

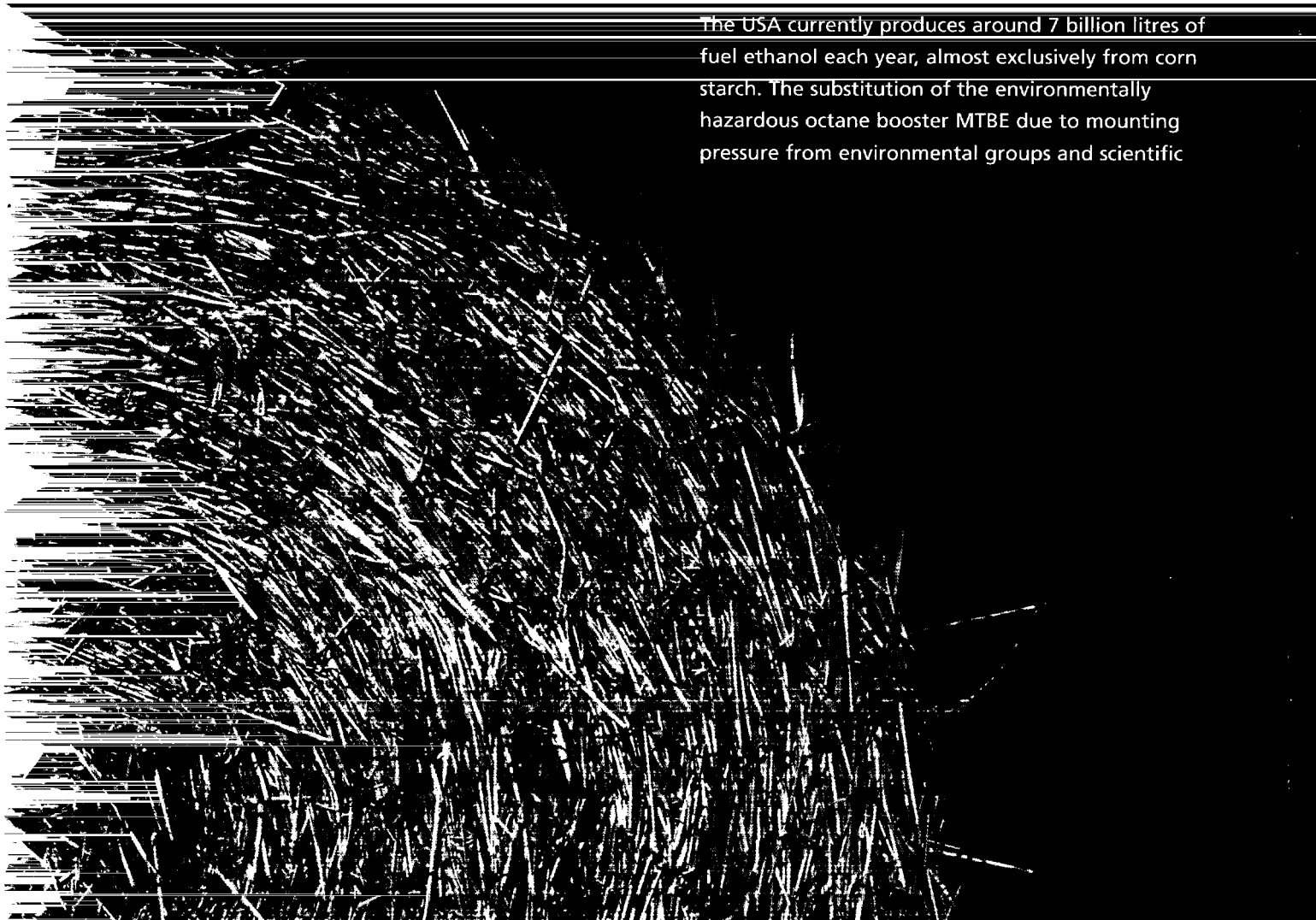
Energy. This authority has advanced plans to phase out hazardous petrochemical additives in petrol blends, replacing them with fuel ethanol.

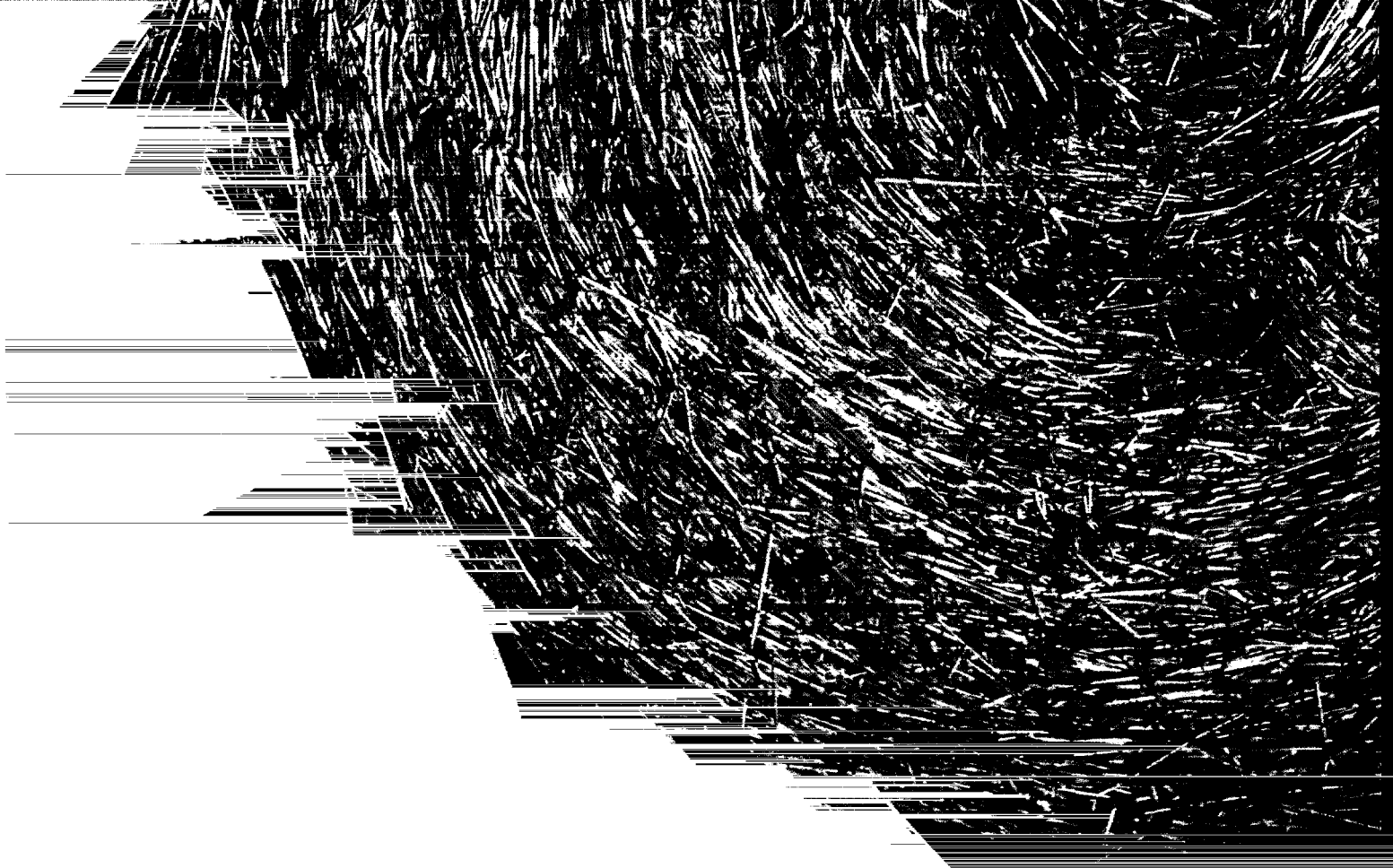
"We are really proud that the US energy authorities have chosen us for this project with the goal of developing better and cheaper enzymes for ethanol production," states Per Falholt, Executive Vice President, R&D.

The idea is to develop highly effective enzymes capable of bringing down the cost of turning plant material into fermentable sugars that can be used in the production of fuels.

Sustainable alternative

The USA currently produces around 7 billion litres of fuel ethanol each year, almost exclusively from corn starch. The substitution of the environmentally hazardous octane booster MTBE due to mounting pressure from environmental groups and scientific





"If agricultural waste can replace chemicals in petrol blends, the real winner will be the environment"

Glenn E. Nedwin, President, Novozymes Biotech, Inc., Davis

could result in the market growing to some 25 billion litres by 2010, according to the US Department of Energy. Alternatives to corn starch are now being developed to meet the anticipated increase in demand for ethanol. The use of cellulosic waste (biomass) is an attractive alternative because it is renewable, does not compete with the food market and can be harvested from the same land as the corn varieties currently used for food production.

Reliant on cheap and effective enzymes

Ethanol is produced by fermenting glucose, which can be obtained either from starchy materials like corn's kernels or from cellulosic materials like corn's leaves and stalks. Novozymes is a longstanding producer of enzymes for ethanol production from corn starch, and a number of US farming states surplus corn production has for many years been processed into ethanol with the help of enzymes.

Novozymes' primary role in the research project is to develop enzymes that facilitate production of ethanol from all types of vegetable matter. However, the cost of producing the enzymes must drop to one tenth of the current price before it will be realistic to let nature's magic take over from chemical processes. The introduction of a viable technology for the production of glucose from cellulose would also open up new markets for glucose, which could be used to make a number of other products currently produced from oil, including colourings, printing inks, paints, synthetic fibres and plastics.

In practical terms, the new generation of enzymes must be able to effectively "chop up" the cellulose fibres in all types of vegetable material, thereby making the sugar molecules (glucose) in the "waste material" accessible. The sugar molecules can be fermented into alcohol which is then added to petrol.

Focus on partnerships	production of fuel ethanol from	the element of biomass-to-ethanol
"A primary objective of the US	biomass. We have identified more	technology with the greatest
Department of Energy's National	effective enzymatic breakdown of	potential for cost reduction. We
Biofuels Program is cost-competitive	cellulose into fermentable sugars as	expect that under this contract

Increasing ethanol production

The USA plans a major increase in ethanol production by 2010, when US ethanol plants are expected to be able to supply 23 billion litres of ethanol for petrol applications, mainly to replace MTBE.

"Agricultural waste can replace chemicals in petrol blends, the real winner will be the environment," says Glenn E. Nedwin, President of Novozymes Biotech, Davis. "A major new market will also open up for Novozymes."

But the USA is not the only country with plans to replace some oil-based fuels with sustainable forms of energy. China's substantial surplus production of corn products has also led to plans to expand ethanol production, while in late 2001 the EU also presented plans for how environmentally friendly petrol, e.g. ethanol, can partly replace current oil-based fuels from as early as 2005. ■

Enzymes for environmentally friendly petrol

In 2001 Novozymes embarked on a three-year research project in cooperation with the US Department of Energy, which has granted up to USD 14.8 million for the development of new, more effective enzymes for ethanol (alcohol) production. The aim is to produce environmentally friendly petrol whereby ethanol based on vegetable matter from agriculture can replace petrochemicals such as MTBE. Particularly around filling stations MTBE has polluted soil and has also been found in potable water from wells. Novozymes' US research centre in Davis, California, heads and coordinates the ethanol project which involves 45 employees from Novozymes' research laboratories in Denmark, China and the USA.



Novozymes will make great strides
in improving enzyme systems and
that this improvement will play a
key role in allowing ethanol from

cellulosic biomass to help meet
America's transportation fuel needs
with clean, domestic, renewable
energy."

*David Garman, Assistant Secretary,
Energy Efficiency & Renewable Energy,
Department of Energy, USA*

David Garman

US Department of Energy



Healthier margarine thanks to new enzyme





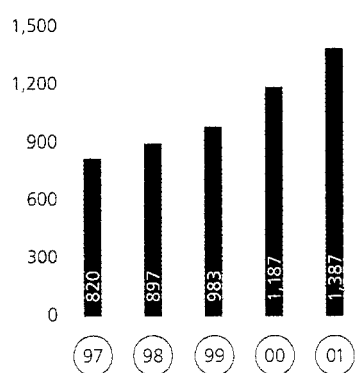
**"A high level of
trans fatty acids
in foods is far
more of a health
hazard than pre-
viously realised"**

**Professor Arne Astrup,
President of the Danish
Nutrition Council**



Sales of food enzymes continued to grow in 2001

DKK million



14% average annual growth over five years

Trans fatty acids in margarine

For the last century margarine fats have been produced using chemical processes that change the melting point of the fat mixture to give it properties similar to butter.

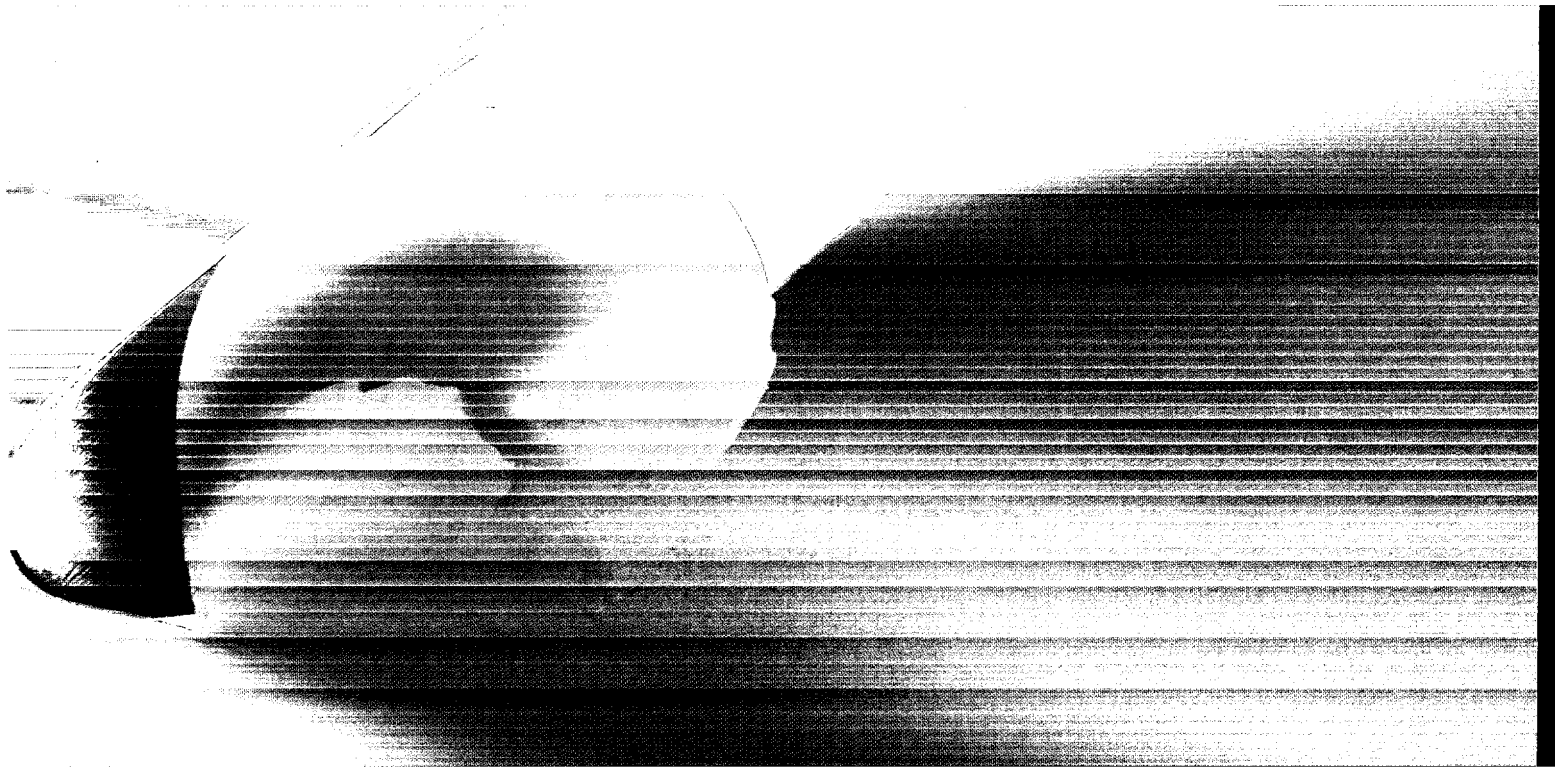
This hydrogenation of the margarine fat results in the formation of trans fatty acids. The medical world has been warning for many years now of the trans fatty acids contained in industrial margarines, which are used in significant quantities in ready meals, snacks, biscuits and so on.

Total annual production of margarine in the western world is estimated to be up to nine or ten million tonnes.



Arne Astrup

Danish Nutrition Council





Novozymes A/S
Krogshoejvej 36
2880 Bagsvaerd
Denmark

Tel. +45 8824 9999
Fax +45 8824 9998
info@novozymes.com

For more information
or for international
office addresses
please see
www.novozymes.com



Healthier fats

Enzymes are pure technology for oil and margarine without trans fatty acids

Detergent enzymes
Detergent enzymes
lower than expected

Improved beer quality
Brewing enzymes harmonise
quality

With enzymes
enzymes improve cleaning
properties of toothpaste

Sustainable growth

Report

CEO statement

Financial highlights

World leader in enzymes

Report of the Board of Directors

Stronger growth through new strategic initiatives

We work for Novozymes

Success for environmentally friendly feed enzyme

New products to bring growth in the detergent industry

Sustainable octane counts

Healthier margarine thanks to new enzyme

Using enzymes gives nature

helping hand

Accounts

Financial discussion

Consolidated accounts and annual accounts for 2001

Accounting policies

Management statement and auditors' report

The Novozymes Group

Summary of the Novozymes Group 1997-2001

Subsidiaries of Novozymes A/S

Novozymes A/S

Share information

Board of Directors and Executive Management

Affiliates and offices

Soft drinks

Enzymes convert starch in

corn to sugar in soft drinks

Enzymes

Enzymes for pasta and

noodles can become an

interesting application area

Baking enzymes are rising

Novozymes' F was a new

product in 2001



Novozymes

Novozymes A/S
Krogshøjvej 36
2880 Bagsvaerd
Denmark

Tel. +45 8824 8999
Fax +45 8824 8555
info@novozymes.com

For more information
or for international
office addresses

see
novozymes.com

Financial definitions

Cash flow from operating activities per share (diluted)

Cash flow from operating activities divided by the weighted average number of outstanding shares (diluted).

Earnings per share (diluted)

Net profit divided by the weighted average number of outstanding shares, excluding the holding of own B shares and including share options in-the-money.

EBITDA

Operating profit excluding depreciation and amortisation.

EBITDA margin

Operating profit excluding depreciation and amortisation as a percentage of net turnover.

Effective tax rate

Tax on ordinary income as a percentage of ordinary profit before taxation and extraordinary items.

Equity ratio

Shareholders' equity at year-end as a percentage of the sum of total assets at year-end.

Cash flow

Cash flow before financing.

Invested capital

Net assets excluding securities and cash at bank and in hand, less provisions and current liabilities excluding bank loans.

Net interest-bearing debt

The market capitalisation of interest-bearing liabilities (long-term liabilities as well as short-term liabilities, including the value of potential pension commitments) less the market capitalisation of cash at bank and in hand and other easily convertible securities.

Operating profit margin (operating profit)

Operating profit as a percentage of net turnover.

Return on equity

Income before extraordinary income as a percentage of average shareholders' equity (the sum of shareholders' equity at the beginning of the year and at year-end divided by two).

Return on Invested Capital (ROIC)

Return on invested capital defined as operating profit after tax as a percentage of the average invested capital. The operating profit is adjusted for net foreign exchange gain/loss.

Weighted average number of shares outstanding

Weighted average number of A and B shares outstanding at year-end.

Weighted average number of shares outstanding

Weighted average number of A and B shares outstanding including the holding of own B shares and including share options in-the-money.

Accounts



Accounts

Financial discussion	4
Consolidated accounts and annual accounts for 2001	7
Accounting policies	9
Management statement and auditors' report	14
The Novozymes Group	15
Summary of the Novozymes Group 1997-2001	32
Subsidiaries of Novozymes A/S	34
Novozymes A/S	35
Share information	42
Board of Directors and Executive Management	45
Affiliates and offices	47

"We will continue to expand our current position as the world leader in enzymes to ensure future growth in this field. In addition we will select new fields that match our technology and competencies and thus gradually expand into other areas of the biotech market"

Financial discussion

Novozymes 2001

Sales rose by 5% to DKK 5,271 million from DKK 5,033 million in 2000.

Operating profit increased by 10% to DKK 904 million.

The operating profit margin, defined as operating profit as a percentage of net turnover, increased from 16.4% to 17.2%.

The Group generated profits of DKK 871 million before and DKK 602 million after tax, corresponding to growth against 2000 of 24% before and 25% after tax.

Earnings per share increased by 26% from DKK 6.41 to DKK 8.10.

Net capital expenditure totalled DKK 469 million, which was less than the year's depreciation charges.

Free cash flow developed satisfactorily to DKK 487 million, including the acquisition of Novozymes Biologicals. Free cash flow adjusted for acquisitions is higher than in 2000.

The return on invested capital (ROIC) improved from 9.8% in 2000 to 12.0% in 2001. ROIC is defined as operating profit after tax as a percentage of average invested capital (adjusted for exchange gains/losses from the hedging activities in the respective years).

The results match the growth targets for 2001 stated in Novozymes' financial statement announced on 21 February 2001.

Sales

Sales increased by 5% from DKK 5,033 million to DKK 5,271 million in 2000. Volumes, prices and product mix accounted for most of the increase since exchange rate movements had only a weak negative impact on sales.

The growth rate was particularly strong in North America, although sales are positively affected by the strength of the dollar against the Danish krone. Sales in Asia likewise developed satisfactorily after adjustment for stock buy-backs in Japan and the unfavourable development

in exchange rates in Asia. Latin America was the only geographical area to show a sales decline, which is due to a combination of the negative impact of exchange rate fluctuations, especially the devaluation of the Brazilian Real, and a moderate downturn in sales to the detergent industry.

Sales of technical enzymes, etc. decreased by 3% against 2001. Adjusted for stock buy-backs in the period sales of technical enzymes, etc. fell by 2%.

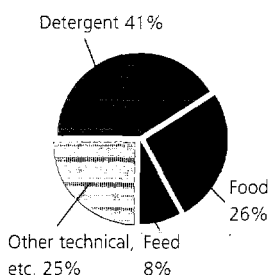
As stated previously, sales to the detergent industry, especially of the protease product group, were affected by fierce competition, and were therefore exposed to pressure on both volumes and prices.

Sales of other technical enzymes, etc., which now include the sales of Novozymes Biologicals, performed well. The background was the acquisition of Novozymes Biologicals, whose sales and integration with the rest of the Group are proceeding according to plan, as well as the ongoing favourable growth rates for sales to the fuel ethanol industry.

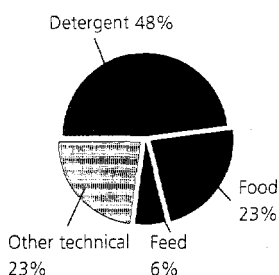
Sales of food enzymes showed a good rate of increase at 17%. Especially enzymes for the baking and beverage industries made sound contributions to sales growth. All application areas for food enzymes showed healthy growth. The introduction of the new baking enzyme, Lipopan® F, proceeded satisfactorily.

Feed enzymes achieved extremely strong growth at 47%. The significant sales growth was related to the bans on use of meat-and-bone meal in animal feeds by the EU, and now also Japan, as well as a very successful strategic alliance between Roche Vitamins and Fine Chemicals and Novozymes.

Sales in 2001
By industries



Sales in 2000
By industries



Costs

Total costs excluding net financials and tax rose by 4%, to DKK 4,367 million in total. Costs thus increased less than sales.

Production costs rose by 4% to DKK 2,516 million. The background is a volume increase exceeding 7%. The gross profit margin climbed from 52.0% to 52.3% due among other things to better production yields.

Sales and distribution costs rose by 4% to DKK 680 million.

Research and development costs increased by 5% to DKK 678 million.

Administrative expenses rose by 3% to DKK 531 million.

Total staff costs, including Novozymes Biologicals, increased by 9% to DKK 1,453 million. The workforce showed a moderate increase from 2000 after adjustment for acquisitions, with an average of 3,349 employees in 2001.

Depreciation charges, which are distributed between the relevant cost items above, amounted to DKK 492 million, against DKK 491 million in 2000.

Licence fees and Other operating income

Licence fees and Other operating income rose from DKK 23 million in 2000 to DKK 38 million in 2001. The figure is positively affected by payments from the US Department of Energy in connection with a research grant for development of enzymes for fuel ethanol production (alcohol as a petrol additive).

Net financials

Novozymes recorded net financial expenses of DKK 33 million, down from DKK 120 million in 2000.

	2001	2000
Net foreign exchange losses/gains	36	(65)
Net interest receivable/interest payable	(76)	(77)
Other financial items	7	22
Financial items, total	(33)	(120)

Profit before and after tax and movements in shareholders' equity

The Group generated profit of DKK 871 million before and DKK 602 million after tax, corresponding to growth of 24% before and 25% after tax.

Group shareholders'

equity at beginning of 2001	3,962
Net profit	602
Value adjustment of hedging instruments	(45)
Dividend paid	(124)
Purchase of own participating interests	(424)
Currency translation of participating interests in subsidiaries, etc.	87
Group shareholders' equity at end-2001	4,058

Capital expenditure and free cash flow

Net capital expenditure increased from DKK 383 million to DKK 469 million. The investment level includes acquisitions. Free cash flow fell from DKK 655 million to DKK 487 million. Free cash flow after adjustment for the acquisition was higher in 2001 than in 2000.

Share options

Since the target for the new employee option scheme was met in 2001, options will be issued to around 3,100 Novozymes A/S staff at an agreed price of DKK 186, the average price in the week that the option scheme was announced.

The option scheme for 2001 totals approximately 1.3 million B shares. The options can be utilised after 3 years at the earliest. The Board of Directors has approved an equivalent option scheme for 2002. As for the preceding option scheme, options are only granted if certain financial targets are met.

Outlook for 2002

See the Report of the Board of Directors on p.10 of the Report.

Financial risk factors

The most important financial risks can be divided into three categories: currency, interest rate and counterparty exposure.

Currency exposure arises partly because there is no balance between income and expenses in the individual currencies, and partly because the Group has net assets in a number of foreign companies. The Novozymes Group has net expenses in DKK while net income is generated in other currencies than DKK. The exposure is greatest against USD, EUR and JPY. A 5% movement in USD and JPY would, all other things being equal, result in an annual change in operating profit of around DKK 20-35 million and DKK 5-15 million respectively. A 2.25% movement in EUR would, all other things being equal, result in an annual change in operating profit of around DKK 30-35 million. Due to Denmark's participation in ERM II, DKK is only allowed to fluctuate within a band of +/- 2.25 % in relation to the central rate.

Novozymes' policy is to hedge assets and liabilities in foreign currencies already accounted for and future anticipated net cash flows from business operations. Hedging is carried out, primarily for USD and JPY, a number of months ahead through a combination of loans, forward contracts, currency swaps and options. Other currencies are hedged to a lesser extent. The hedging transactions are based on Novozymes' expectations of future exchange rate fluctuations. Currency exposure relating to the net assets of foreign companies is hedged to a certain extent.

Interest rate exposure arises in relation to interest-bearing assets and liabilities. A change of one percentage point in the average interest rate of the Group's interest-bearing net liabilities would have an effect on profit before tax of DKK 6 million. The use of financial instruments is regulated by a treasury policy and procedures which among other things define approved instruments and risk limits. Financial instruments may only be contracted with a view to safeguarding existing assets, liabilities or expected future net cash flows.

According to the treasury policy of Novozymes free funds may only be invested in government bonds, extremely liquid domestic mortgage-credit bonds, and money-market deposits.

Counterparty exposure is managed by dealing only in financial instruments and by placing deposits with a limited number of banks having a satisfactory long-term credit rating.

Forward-looking statements

The sections above contain forward-looking statements. Forward-looking statements are by their very nature associated with risks and uncertainties that may cause actual results to differ materially from expectations, including unexpected developments in the international currency, bond and money markets, market-driven price decreases for Novozymes' products, and the introduction of competing products in Novozymes' core areas. ■

Consolidated accounts and annual accounts for 2001

The Annual Report for 2001 of Novozymes A/S is prepared in accordance with the adopted Danish Act on the presentation of annual accounts, etc. by business enterprises, Act. no. 448 of 7 June 2001 (the Company Accounts Act 2001). The Annual Report has also been prepared in accordance with the regulations of the Copenhagen Stock Exchange for the presentation of accounts by listed companies. The Annual Report has furthermore been prepared in accordance with the following description of the accounting policies. With the exception of the issues described in 'Changes in accounting policies', the accounting policies are unchanged from the accounting policies adopted last year.

The implementation of the Danish Company Accounts Act 2001 one year prior to the statutory requirement has entailed certain adjustments to the accounting policies. These adjustments have had no impact on the profit and loss account, and have had only a minor impact on shareholders' equity and the balance sheet, as presented below.

Changes in accounting policies

As a consequence of the Danish Company Accounts Act 2001 the accounting policies have been changed in respect of the following:

- Derivative financial instruments are first recognised in the balance sheet at cost and are thereafter measured at fair value, while positive and negative fair values of derivative financial instruments are stated under Other debtors or Other creditors. If the derivative financial

instruments are used to hedge future cash flows the value adjustments to hedging instruments are recognised directly to shareholders' equity until the hedged assets are realised. Previously, the value of derivative financial instruments used to hedge future cash flows was not recognised in the balance sheet, but was only stated in the notes. The change results in an increase of DKK 22 million in shareholders' equity at 31 December 2001, an increase in Other debtors of DKK 31 million, and an increase in Deferred tax of DKK 9 million. At 31 December 2000 shareholders' equity is increased by DKK 67 million, Other debtors by DKK 96 million, and Deferred tax by DKK 29 million.

- The proposed dividend is recognised separately under shareholders' equity until adopted by the annual meeting of shareholders (declaration date). Previously, dividend was recognised under Current liabilities until adopted by the annual meeting of shareholders. The change results in an increase in shareholders' equity at 31 December 2001 by DKK 146 million (DKK 124 million at 31 December 2000) and an equivalent reduction of Current liabilities.
- The revaluation reserve for securities is recognised as free reserves under Retained earnings. Previously, value adjustment of securities was recorded as Revaluation reserve under shareholders' equity. The result of the adjustment is that at 31 December 2001 DKK 27 million is not recorded as Revaluation reserve. Instead, the revaluation of securities is stated as free reserves under Retained earnings.

►►



Part of the local community

Todd Cole, aged 30, is responsible for ongoing financial reporting from Site Franklinton in North Carolina, where he grew up in a rural community. He joined Novozymes almost four years ago when his former employer moved the whole of its financial department to another state. "My brother-in-law worked for Novozymes, and he told me about a company where they took a new approach to things and where the management considered being part of the local community to

be important. I have always had a strong awareness of how the company really values its employees." Todd Cole considers Novozymes' ability to become an integrated part of the local community to be quite outstanding.

"In my eyes Novozymes is a family-oriented business. This concept isn't all that common in the US. I was very excited about what my brother-in-law had to say, and I haven't been disappointed. If you take the initiative, you can be pretty certain that the management will make the opportunities available. If you're really enthusiastic about something, you will get the chance to try things out in practice," says Todd Cole.

The comparative figures and the summary and key figures for 1997-2001 are adjusted in accordance with the changes in accounting policies described above.

The accumulated effect of the changes in accounting policies increases the shareholders' equity by an amount totalling DKK 168 million to DKK 4,058 million at 31 December 2001.

In connection with the preparation of the Annual Report for 2001 in accordance with the Company Accounts Act 2001 Novozymes has assessed the Group's primary segments to be enzymes and microorganisms.

General recognition and measurement principles

As revenue is earned it is recognised in the profit and loss account, including value adjustment of financial assets and liabilities that are measured at fair value or amortised cost. All costs, including depreciation and write-downs, are recognised in the profit and loss account.

Assets are recognised in the balance sheet when it is considered probable that future economic benefits will

accrue to the company, and the asset's value can be measured on a reliable basis.

Liabilities are recognised in the balance sheet when they are considered probable and can be measured on a reliable basis.

When first recognised assets and liabilities are measured at cost. Thereafter assets and liabilities are measured as described below for each item of the accounts.

Certain financial assets and liabilities are measured at amortised cost using a constant effective yield to maturity. Amortised cost is calculated as original cost less any redemptions, as well as addition/deduction of the accumulated amortisation of the difference between cost and nominal amount. Capital gains and losses are thus distributed on remaining maturity.

The recognition and measurement principles take due account of predictable losses and risks occurring before the presentation of the annual report that confirm or refute the conditions prevailing on the balance sheet date. ■

Accounting policies

Basis of consolidation

The consolidated accounts comprise the accounts of Novozymes A/S (the parent company) and all the companies in which the Group owns more than 50% of the voting rights or otherwise has a controlling influence (subsidiaries).

The consolidated accounts are based on accounts for the parent company and for the subsidiaries and are prepared by combining items of a uniform nature and eliminating intercompany transactions, shareholdings and balances, and unrealised intercompany profits on stocks. All accounts used for consolidation are prepared by applying the accounting policies of the Group.

On acquisition of new companies, the purchase method is applied. The assets and liabilities of the new companies are thus restated at fair value at the time of acquisition. A positive difference between the fair value of the acquired assets and liabilities and the cost price is goodwill, which is recognised as an asset in the balance sheet and amortised over the expected economic life. Goodwill from acquisitions is adjusted for changes in recognition and measurement of net assets until one full financial year after date of acquisition.

Newly acquired companies are recognised in the profit and loss account for the period of ownership. Comparative figures are not adjusted for newly acquired companies.

Translation of foreign currencies

Assets and liabilities in foreign currencies are translated into Danish kroner at the rates of exchange ruling on the balance sheet date.

Accounts of foreign subsidiary companies that are separate entities are translated into Danish kroner using exchange rates ruling on the balance sheet date for assets and liabilities, and average exchange rates for profit and loss items.

Realised and unrealised foreign exchange gains and losses are recognised in the profit and loss account, with the exception of exchange gains and losses arising from:

- translation of the net assets of foreign subsidiaries at 1 January at the closing rates at 31 December of the same year;

- translation of the profit and loss accounts of foreign subsidiaries from average exchange rates to the exchange rates ruling at the balance sheet date;
- translation of long-term intercompany loans which are considered to be equivalent to shareholders' equity in subsidiaries at the exchange rates ruling at the balance sheet date;
- translation of currency swaps contracted to hedge net assets in subsidiary companies at the exchange rates ruling at the balance sheet date.

The above are recognised directly in Other comprehensive income under shareholders' equity.

For subsidiaries in high-inflation countries non-monetary items and shareholders' equity are, however, translated into Danish kroner at historical exchange rates, and all exchange rate adjustments are recognised in the profit and loss account.

Derivative financial instruments

Forward exchange contracts and currency options hedging receivables and debt in foreign currency are recognised at fair value at the balance sheet date, and value adjustment is recognised in the profit and loss account under financial income and expenses.

Forward exchange contracts and currency options hedging future income and expenses are measured at fair value on the balance sheet date, and value adjustments are recognised directly to shareholders' equity.

Currency swaps are used to hedge net investments in subsidiaries. Currency swaps are recognised on the basis of the difference between the swap rate and the exchange rate on the balance sheet date, and the value adjustment is recognised directly to shareholders' equity.

Derivative financial instruments used to hedge the interest rate exposure on financial assets and liabilities are first recognised in the balance sheet at cost and are thereafter measured at fair value. All value adjustments are recognised directly to shareholders' equity. Revenue and costs related to such hedging transactions are transferred from shareholders' equity on the realisation of the hedged asset and are recognised under Financial income and expenses.

Positive and negative fair values of financial instruments are recognised under Other debtors and Other creditors respectively.

Leasing and rental agreements

Operational leasing costs and rental costs are recognised in the profit and loss account over the term under the functions to which they relate. The remaining leasing and rental commitments for the non-cancellable lease period are disclosed in the notes under Contingent liabilities.

Share-based remuneration

Share options issued to the employees of the Novozymes Group at an exercise price equivalent to the share price on the allocation date are not recognised in the balance sheet or the profit and loss account if they are hedged by the holding of own participating interests. The Novozymes Group intends to hedge allocated share options on a current basis by acquiring own participating interests. Subsequent value adjustment of the share options is considered to be hedged by the equivalent change in the value of the holding of own participating interests.

Details of options issued, the exercise price and the market value assessed by the Black-Scholes model are given in the notes.

Grants

Grants are related to research and development and to investments. Grants received which relate to research and development are recognised under Licence fees and Other operating income (net) based on the percentage of completion of the project. In the event of reimbursements, refunds are charged to the profit and loss account under Licence fees and Other operating income (net).

Grants received which relate to investments are recognised under liabilities on receipt, and are thereafter recognised under Licence fees and Other operating income (net) in step with the economic lives of the assets for which the grants are made.

Profit and loss account

Net turnover

Net turnover represents amounts invoiced for the year after deduction of goods returned, trade discounts and

allowances. Sales are recognised at the time of risk transfer related to the goods sold.

Production costs

Production costs are acquisition or cost price for goods sold during the year and comprise both direct and indirect production costs. The cost price comprises materials, energy, wages, salaries and depreciation, etc. Production costs furthermore include write-downs on stocks.

Sales and distribution costs

Sales and distribution costs comprise costs incurred on the sale, distribution and marketing of the products of the Group, including salaries, depreciation, write-downs for losses and realised losses on trade debtors.

Research and development costs

Research and development costs comprise costs attributable to the registration and administration of patents, salaries and depreciation, related directly or indirectly to the Group's research and development activities. Research costs are recognised as expenditure as they are incurred.

Development costs pertaining to ongoing optimisation of production processes for existing products, or to development of new products where lack of approval by the authorities, approval by customers and other factors of uncertainty entail that the development costs do not fulfil the criteria for recognition in the balance sheet are recognised as expenditure as they are incurred.

Administrative expenses

Administrative expenses comprise the costs of the administrative functions, including salaries and depreciation.

Licence fees and Other operating income (net)

Licence fees and Other operating income (net) primarily comprise licence fees, grants from public authorities to research projects and investments, and income (net) of a secondary nature in relation to the main activities of the Group.

The item also includes one-off income items (net) in respect of out-licensing, etc.

Financial income and expenses

Interest for the period is recognised in the profit and loss account irrespective of payment terms.

Financial income and expenses comprise realised and unrealised gains and losses on foreign exchange, securities and the main part of other financial instruments and other financial income and expenses.

Tax

Tax payable for the year, comprising the current tax liability, the change in deferred tax for the year and any adjustments from previous years, is recognised in the profit and loss account at the amount attributable to the net profit, and directly to shareholders' equity at the amount attributable to items recognised directly to shareholders' equity. Tax payable for the year is recognised to current liabilities, and deferred tax is recognised to provisions.

Deferred tax is measured by the liability method and comprises all temporary differences between the accounting and tax values of the assets and liabilities. No deferred tax is recognised for goodwill, unless amortisation of goodwill for tax purposes is allowed. Further, deferred tax is recognised for re-taxation of losses realised in jointly-taxed foreign companies, if the re-taxation is expected to be realised on the sale of shares or the company's withdrawal from joint taxation.

Tax losses carried forward are set off against deferred tax liabilities to the extent that the tax losses are expected to be utilised in the future.

Deferred tax is measured according to current tax rules and at the tax rate expected to be in force on the elimination of the temporary differences. Changes in deferred tax due to tax rate adjustments are recognised in the profit and loss account.

Novozymes A/S has chosen to be assessed with certain of its foreign and domestic subsidiary companies for tax purposes. The parent company provides for the aggregate Danish tax payable on the taxable income of these subsidiaries, and for deferred tax for the Danish companies. The jointly assessed companies are included in the scheme for on account payment of tax.

Balance sheet

Intangible fixed assets

Intangible fixed assets are stated at the lower of cost less accumulated amortisation and write-downs or at recoverable value if lower. Amortisation is provided by the straight-line method over the expected economic lives of the assets, as follows:

- Acquired patents, licences and know-how are amortised over their duration, not exceeding 20 years. Patents are amortised over their duration, which is normally identical to the patent period, and licences are amortised over the agreement period. Booked patents, licences and know-how are amortised over 7-20 years.
- Goodwill is amortised over the expected economic life, not exceeding 20 years. Booked goodwill is amortised over 5-15 years.

Tangible fixed assets

Tangible fixed assets are stated at cost less accumulated depreciation and write-downs or at recoverable value if lower. Cost includes capitalised interest in respect of construction of major investments.

IT projects regarding development of software for internal use are capitalised under Other equipment.

Depreciation is provided under the straight-line method over the following expected useful lives:

- Buildings, 12-50 years
- Production plant and machinery, 5-16 years
- Other equipment, 3-16 years

Fixed assets below DKK 50,000 and fixed assets with an expected useful life below 3 years are charged to the profit and loss account in the year of acquisition.

Write-down of fixed assets

Fixed assets are written down to recoverable value if lower than carrying value. An annual impairment test of each asset or group of assets is performed.

Fixed asset investments

In the annual accounts participating interests in subsidiaries are recognised under the equity method, i.e. at the respective share of the subsidiaries' net assets, with addition of goodwill.

In the annual accounts the parent company's share of net profit of subsidiaries less unrealised profit on stocks is recognised in the profit and loss account. If the shareholders' equity of subsidiaries is negative, receivables from the subsidiaries will be set off against the parent company's share of the negative equity, subject to actual assessment. If the parent company has a legal or actual obligation to cover the company's negative equity a provision is recognised.

To the extent that it exceeds dividends received from such companies, net revaluation of participating interests in subsidiaries is transferred to the Net revaluation reserve under shareholders' equity.

Other securities and participating interests comprise debt instruments acquired for permanent ownership. These are measured at cost less repayments and write-down for depreciation. Write-downs are recognised in the profit and loss account under Financial income and expenses.

Stocks

Raw materials and consumables are stated at cost determined on a first-in first-out basis. In cases where cost exceeds the net realisation value stocks are written down to this lower value.

Work in progress and finished goods are stated at cost determined on a first-in first-out basis. Cost comprises direct production costs such as raw materials and consumables including energy and labour, and indirect production costs such as maintenance, depreciation of production plant, etc.

Stocks for which the expected sales price less completion costs and costs to execute the sale (net realisation value) is lower than the cost price, are written down to net realisation value.

Debtors

Debtors are measured at amortised cost or a lower net realisation value equivalent to nominal value, less write-down for losses on doubtful debts. Write-down is based on an individual assessment of each debtor, which also includes an evaluation of payment risk associated with individual countries.

Securities

Securities are measured at fair value at the balance sheet date. Realised and unrealised gains and losses are included in the profit and loss account under Financial income and expenses.

Revaluation of securities at market value is included as a free reserve under Retained earnings.

From the time of the Demerger, shares in Novo Nordisk A/S are recognised in the balance sheet as Securities. Most of the shares in Novo Nordisk A/S are used to hedge the share option commitments for which Novozymes A/S is liable and are stated at the option prices, while other listed shares are stated at the share price at the balance sheet date.

Shareholders' equity

The dividend proposed for the financial year is stated as a separate item under shareholders' equity.

The cost price and proceeds from sale of own participating interests are recognised directly to shareholders' equity. Own participating interests in Novozymes A/S are perceived as a de facto capital reduction and the cost price is therefore deducted directly from shareholders' equity. The company's holdings of own participating interests are used primarily to hedge share options issued.

Minority interests

On compilation of Group profit and shareholders' equity minority interests' proportional shares of the profit and shareholders' equity of the subsidiaries are stated as separate items of the profit and loss account and balance sheet.

Contingent liabilities

Contingent liabilities are recognised when the Group holds a liability as a consequence of events in the financial year or previous years, and it is considered probable that redemption will require financial resources.

Pension obligations

The Group has established pension agreements with a significant proportion of its employees.

The Group pays current fixed contributions to defined contribution plans. Costs related to defined contribution plans are recognised in the profit and loss account, and any payable amounts are recognised in the balance sheet under Other creditors.

Costs related to benefit plans are accrued over the expected working life of the employee. The present value of non-financial plans is provided under provisions. The change in provisions for the year is recognised in the profit and loss account.

Segmented data

In connection with the preparation of the Annual Report for 2001, in accordance with the Company Accounts Act 2001 Novozymes has assessed that the Group's activities comprise two segments: enzymes and microorganisms. As the microorganism segment constitutes less than 10% of the total assets, turnover or result, there is no requirement to present separate segmented data in accordance with international accounting standards. Nonetheless, Novozymes does present certain segmented data, cf. Note 1 in the consolidated accounts.

The Novozymes Group is managed primarily on the basis of a customer focus with relation to a number of strategic and local customers. The Group has business activities relating to enzymes and microorganisms. Segmented data for business activities in the primary segment is reported.

The Group's business activities cannot be meaningfully allocated to geographical markets since sales to a number of global strategic customers are registered to a country, and the final place of consumption is not known to Novozymes. Furthermore, Novozymes has a number of similar factories at sites in different geographical areas where production is planned globally. The stated geographical distribution of turnover is based on the location of the customer, and significant year-on-year fluctuations can occur since the country in which the customer is domiciled determines the geographical location of turnover.

Consolidated statement of cash flows and financial reserves

The consolidated statement of cash flows and financial reserves shows cash flow for the year allocated to oper-

ating, investing and financing activities, the financial reserves for the year, and the financial reserves at the beginning and end of the year.

Cash flow from operating activities

Cash flow from operating activities indirectly comprises net profit adjusted for non-cash operating items, interest received, interest paid, income taxes paid, and corporation tax paid. Working capital consists of current assets less current liabilities, excluding those items which are included in financial reserves.

Cash flow from investing activities

Cash flow from investing activities comprises the acquisition and sale of intangible and tangible fixed assets and fixed asset investments.

Cash flow from financing activities

Cash flow from financing activities comprises the proceeds from and the repayment of principal on interest-bearing loans, dividends, the proceeds from share issues and purchase of own participating interests.

Financial reserves

Financial reserves comprise cash at bank and in hand and securities with a duration of less than three months, less short-term bank loans due on demand. Undrawn committed credit facilities expiring in more than one year are also included in financial reserves.

United States Generally Accepted Accounting Principles (US GAAP)

The Company prepares a reconciliation of the effect on shareholders' equity and the profit and loss account of the application of US Generally Accepted Accounting Principles in lieu of Danish principles. The US GAAP reconciliations are disclosed in Note 27 to the accounts for the Group.

Summary and key figures

Key figures are mainly prepared in accordance with the "Recommendations and Key Figures" of the Danish Society of Financial Analysts, although certain key figures are adjusted to the Novozymes Group, including ROIC. The key figures stated in the Group summary are calculated as described in the Glossary on the inside cover of the Annual Report. ■

Management statement and auditors' report

Statement of the Board of Directors and the Management

The Board of Directors and the Management have considered and approved the Annual Report 2001 of Novozymes A/S. The Annual Report has been prepared in accordance with the Danish Company Accounts Act of 7 June 2001, and the regulations of the Copenhagen Stock Exchange for the presentation of accounts by listed companies. In our opinion the accounting policies are appropriate and the Annual Report gives a true and fair view of the Group's and the parent company's assets, liabilities, financial position, net profit and cash flow.

The Annual Report is submitted for the approval of the Annual Meeting of Shareholders.

Gladsaxe, 6 February 2002

Management:

Steen Riisgaard <i>President and CEO</i>	Per Falholt	Per Månsson	Peder Holk Nielsen	Arne W. Schmidt
---	-------------	-------------	--------------------	-----------------

Board of Directors:

Henrik Gürtler <i>Chairman</i>	Kurt Anker Nielsen <i>Vice Chairman</i>	Paul Petter Aas	Jerker Hartwall	Arne Hansen
Lars Bo Køppler	Ulla Morin	Walther Thygesen	Hans Werdelin	

Auditors' report

We have audited the Annual Report of Novozymes A/S for 2001.

This Annual Report is the responsibility of the Company's Board of Directors and Management. Our responsibility is to express an opinion on the Annual Report based on our audit.

Basis of opinion

We conducted our audit in accordance with International and Danish auditing standards. These standards require that we plan and perform our audit to obtain reasonable assurance that the Annual Report gives a true and fair view in all material respects. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Annual Report. An audit also includes assessing the accounting policies applied and significant estimates made by the Board of Directors and the Management, as well as evaluating the overall Annual Report presentation. We believe that our audit provides a reasonable basis for our opinion.

Our audit did not give rise to any qualifications.

Opinion

In our opinion, the Annual Report gives a true and fair view of the Group's and the Company's assets, liabilities, financial position and of the results of their operations and cash flows in accordance with the new Danish Company Accounts Act of 2001 and the accounting regulations for the companies listed on the Copenhagen Stock Exchange.

Gladsaxe, 6 February 2002

PricewaterhouseCoopers

Morten Iversen <i>State-Authorised Public Accountant</i>	Lars Holtug <i>State-Authorised Public Accountant</i>
---	--

Ernst & Young
Statsautoriseret Revisionsaktieselskab

Ole Neerup <i>State-Authorised Public Accountant</i>

Profit and loss account and changes in shareholders' equity

	Note	1999 DKK million	2000 DKK million	2001 DKK million
Net turnover	2	4,501	5,033	5,271
Production costs	3, 5	2,207	2,414	2,516
Gross profit		2,294	2,619	2,755
Sales and distribution costs	3, 5	535	657	680
Research and development costs	3, 5	607	645	678
Administrative expenses	3, 4, 5	479	515	531
Licence fees and Other operating income (net)	6	14	23	38
Operating profit		687	825	904
Financial income	7	144	120	130
Financial expenses	8	229	240	163
Profit before taxation		602	705	871
Corporation tax	9	192	220	267
Profit including minority interests		410	485	604
Equity minority interests		—	(2)	(2)
Net profit		410	483	602
Change in shareholders' equity				
Shareholders' equity at 1 January		2,685	3,344	3,962
Net profit		410	483	602
Currency translation of participating interests in subsidiaries, etc.		255	93	87
Purchase of own participating interests		—	(8)	(424)
Purchase of Novo Nordisk A/S shares before Demerger		—	(189)	—
Transfer of Novo Nordisk A/S shares to		—	—	—
Securities after the Demerger		—	166	—
Dividend paid		—	—	(124)
Value adjustment of hedging instruments		(6)	73	(45)
Shareholders' equity at 31 December		3,344	3,962	4,058

Balance sheet

Assets

	Note	31 Dec 2000 DKK million	31 Dec 2001 DKK million
Acquired patents, licences and know-how		55	178
Goodwill		–	42
Intangible fixed assets	10	55	220
Land and buildings		2,152	2,165
Production plant and machinery		1,540	1,369
Other equipment		374	492
Tangible assets in course of construction and payments on account for tangible assets		465	512
Tangible fixed assets	11	4,531	4,538
Other securities and participating interests		–	22
Fixed asset investments	12	–	22
Total fixed assets		4,586	4,780
Raw materials and consumables		172	166
Work in progress		302	339
Finished goods		766	886
Stocks		1,240	1,391
Trade debtors		802	924
Amounts owed by related parties		26	9
Tax receivable	9	191	212
Deferred tax receivable	9	27	38
Other debtors	13	473	213
Debtors		1,519	1,396
Securities	14	460	193
Cash at bank and in hand		536	693
Total current assets		3,755	3,673
Total assets		8,341	8,453

Liabilities and shareholders' equity

	Note	31 Dec 2000 DKK million	31 Dec 2001 DKK million
Share capital		754	754
Other comprehensive income		312	399
Retained earnings		2,772	2,759
Proposed dividend		124	146
Total shareholders' equity	15	3,962	4,058
Minority interests		83	105
Provisions for pension commitments and similar obligations		59	59
Provisions for deferred tax	9, 16	905	1,017
Other provisions		15	14
Total provisions		979	1,090
Credit institutions	17	902	1,917
Amounts owed to related parties		25	—
Total long-term liabilities		927	1,917
Credit institutions	18	1,352	286
Trade creditors		169	287
Amounts owed to related parties		171	55
Tax payable	9	99	71
Other creditors		599	584
Total current liabilities		2,390	1,283
Total liabilities		3,317	3,200
Total liabilities and shareholders' equity		8,341	8,453

Notes regarding:

Segmented data	1
Foreign currencies in the consolidated balance sheet	19
Financial instruments in the Group	20
Contingent liabilities and pending litigation	21
Related party transactions	22
Grants	23
Cash flow	24, 25, 26
United States Generally Accepted Accounting Principles	27

Cash flows and financial reserves

	Note	1999 DKK million	2000 DKK million	2001 DKK million
Net profit		410	483	602
Reversals with no effect on cash flow	24	480	788	927
Corporation tax paid		(148)	(229)	(199)
Interest received		147	88	61
Interest paid		(139)	(161)	(142)
Cash flow before change in working capital		750	969	1,249
Change in working capital:				
(Increase)/decrease in trade debtors and other debtors		(154)	(212)	27
(Increase)/decrease in stocks		127	88	(139)
Increase/(decrease) in amounts owed to related parties (net)		(32)	121	(105)
Increase/(decrease) in trade creditors and other creditors		105	72	103
Cash flow from operating activities		796	1,038	1,135
Investments:				
Purchase of intangible fixed assets	10	-	-	(179)
Sale of tangible fixed assets		1	15	16
Purchase of tangible fixed assets	11	(567)	(398)	(485)
Cash flow from investing activities		(566)	(383)	(648)
Free cash flow		230	655	487
Financing:				
Long-term loans/(repaid)		1,850	-	1,000
Loan issued/repaid		-	(750)	(1,100)
Loan issued from/(repaid to) the Novo Nordisk Group		(2,398)	(40)	(25)
Purchase of shares in Novo Nordisk A/S		-	(189)	-
Purchase of own participating interests		-	(8)	(424)
Addition to minority interests		-	-	20
Dividend paid		-	-	(124)
Cash flow from financing activities		(548)	(987)	(653)
Net cash flow		(318)	(332)	(166)
Unrealised gain/(loss) on currencies and securities included in financial reserves		94	(13)	(5)
Net change in financial reserves		(224)	(345)	(171)
Financial reserves at 1 January		1,147	923	578
Financial reserves at 31 December	25	923	578	407
Undrawn committed credit facility	26	1,000	1,000	1,500
Financial reserves at 31 December		1,923	1,578	1,907

The figures in the statement of cash flows and financial reserves cannot be derived directly from the consolidated accounts for 1999, 2000 and 2001. The reason is that for each of these years, in order to present the statement of cash flows and financial reserves, the balance sheet at the beginning of the year is converted at the exchange rate at the end of the same year. This eliminates the changes in cash flow due to foreign exchange rate fluctuations.

Notes

Note 1 – Segmented data

Activities – primary segment

2001 DKK million	Enzymes	Micro-organisms	Group total
Net turnover	5,201	70	5,271
Operating profit before depreciation and amortisation (EDITDA)	1,388	8	1,396
EBITDA margin	26.7%	11.4%	26.5%
Operating profit	903	1	904
EBIT margin	17.4%	1.4%	17.2%
Total assets	8,229	224	8,453
Total number of employees at year-end	3,371	104	3,475

The microrganisms segment was acquired at 1 July 2001. In 2001 this segment is negatively affected by integration costs.

Note 2 – Net turnover

	1999 DKK million	2000 DKK million	2001 DKK million
Technical enzymes, etc.	3,289	3,548	3,447
Food enzymes	983	1,187	1,387
Feed enzymes	229	298	437
Total net turnover	4,501	5,033	5,271

By geographical area:

Europe, Middle East, Africa	2,091	2,150	2,231
North America	1,039	1,392	1,562
Asia-Pacific	847	990	1,021
Latin America	524	501	457
Total net turnover	4,501	5,033	5,271

of which percentage sale to two principal customers

32%	29%	24%
-----	-----	-----

Note 3 – Employee costs

	1999 DKK million	2000 DKK million	2001 DKK million
Wages and salaries	1,094	1,115	1,220
Pensions	65	69	70
Other contributions to social security	69	77	86
Other employee costs	68	73	77
Total employee costs	1,296	1,334	1,453

Included in the profit and loss

account under the following functions:

Production	557	572	596
Sales and distribution	204	232	256
Research and development	312	319	342
Administration	218	220	254
Total employee costs	1,291	1,343	1,448

Included in the assets as:

Change in employee costs

included in stocks	5	(9)	5
Total employee costs	1,296	1,334	1,453

Total remuneration to

the Management – 12 15

Total remuneration to

the Board of Directors – 1 2

Average number of employees

in the Novozymes Group 3,199 3,204 3,349

Notes

Note 3 – Employee costs (continued)

Share options

Allocation of share options to the Management, managerial and other staff is tied to results in achieved profits and shareholder value goals. The purpose of the share option scheme is to ensure common goals for Management, employees and shareholders, and to attract and retain employees.

In 2001 share options were allocated to the Management, managerial and other staff. The maturity of the options is eight years, and each option gives the holder of the option the right after three years to purchase one share with a nominal value of DKK 10.

Previously, share options with maturity of between six and eight years have been allocated to the Management. After three years these options give the right to purchase one share with a nominal value of DKK 10. Other managerial staff have previously been allocated share options with maturity of eight years, which after three years give the holder of the option the right to purchase one share with a nominal value of DKK 10. Options concerning year 2000 or later were issued at an exercise price equal to the listed price for the company's shares at the time that the option scheme was announced. Previously the options were issued at an exercise price equal to the listed price for the company's shares at the time that the options were issued.

	Management	Other managerial staff	Other staff	Total	Exercise price per option in DKK*)	Market value per option in DKK*)	Market value in DKK million*)
Share options in Novozymes A/S per share							
Outstanding at 1 January 1999	8,450	19,000		27,450			1
Allocated regarding 1999	7,500	40,400		47,900	101	27	1
Outstanding at 31 December 1999	15,950	59,400		75,350			2
Allocated regarding 2000	8,200	51,500		59,700	101	75	4
Stock exchange listing options, the Management	312,200			312,200	101	88	27
Stock exchange listing options, other managerial staff		326,000		326,000	150	43	14
Transferred to Novo A/S	(3,950)	(4,300)		(8,250)			
Adjustment of value							4
Outstanding at 31 December 2000	332,400	432,600		765,000			51
Allocated regarding 2001	25,100	262,000		287,100	159	36	10
Allocated regarding 2001			926,750	926,750	186	22	21
Employees who left the company in 2001		(17,700)		(17,700)			
Options exercised in 2001	(1,100)			(1,100)			
Adjustment of value							(5)
Outstanding at 31 December 2001	356,400	676,900	926,750	1,960,050			77

*) The market value is calculated on the basis of the Black-Scholes model for valuation of options. For 2001 the calculation is based on the conditions of an earnings per share of DKK 2, and a volatility of 14%; the risk-free interest is assessed at 5%, and the expected maturity is fixed at one year after the expiry of the binding period.

At 31 December 2001 the Group's outstanding Novo Nordisk A/S options amounted to 629,000, with an average exercise price of DKK 183 per share of DKK 2 and a market value of DKK 203 million. These options are hedged by the Group's Novo Nordisk A/S shares recognised at average exercise price. The Management has utilized 5,000 Novo Nordisk A/S options in 2001.

The Group is obliged to divest 8,250 shares at DKK 1 million to Novo A/S with regard to options allocated to employees who were transferred to Novo A/S in connection with the Demerger. The shares shall be divested at a time when the options for these employees can be exercised and Novozymes A/S is committed to reimburse expenses equivalent to the value of the shares at the time of the transition of the employees to Novo A/S. Of these shares 1,100 were divested in 2001 so that the liability at 31 December 2001 totals 7,150 shares.

Note 4 – Fees to statutory auditors

	2000 DKK million	2001 DKK million
Fees from the Novozymes Group to the auditors elected by the annual meeting of shareholders:		
Total fees to PricewaterhouseCoopers	13	16
Total fees to Ernst & Young	1	1
of which pertaining to audit by		
PricewaterhouseCoopers	6	6
Ernst & Young	1	1

Note 5 – Depreciation and amortisation

	1999 DKK million	2000 DKK million	2001 DKK million
Included in the profit and loss under the following functions:			
Production	351	375	381
Sales and distribution	35	36	30
Research and development	55	41	48
Administration	38	39	33
Total depreciation and amortisation	479	491	492

Note 6 – Licence fees and Other operating income (net)

	1999 DKK million	2000 DKK million	2001 DKK million
Other operating income (net)	10	5	27
Licence fees	4	18	11
Total licence fees and Other operating income (net)	14	23	38

Note 7 – Financial income

	1999 DKK million	2000 DKK million	2001 DKK million
Interest receivable	144	89	61
Gains on shares and bonds, etc. (net)	–	31	33
Foreign exchange gain (net)	–	–	36
Total financial income	144	120	130

Note 8 – Financial expenses

	1999 DKK million	2000 DKK million	2001 DKK million
Interest payable	82	166	137
Interest payable to Novo Nordisk A/S	65	–	–
Loss on shares and bonds, etc. (net)	18	–	–
Foreign exchange loss (net)	59	65	–
Other financial expenses	5	9	26
Total financial expenses	229	240	163
Interest payable including capitalised financing interest	154	181	149
Capitalised financing interest under Tangible fixed assets	7	15	12
Estimated interest rate regarding interest payable to Novo Nordisk A/S 3.0%	–	–	–

**Strong Danish traditions**

Maggie Feng Wenrui is account manager for Food/Baking in Novozymes China.

She says: "Even though we are in China, many of the company's traditions and values are influenced by the Danish way of doing things. Novozymes allows us to

take responsibility and to have an influence on our own work. This is different from the international company I used to work for."

Notes

Note 9 – Tax

	Tax in the profit and loss account	Tax payable (tax receivable)	Deferred tax/ (deferred tax receivable)
	DKK million	DKK million	DKK million
At 1 January 2001		(92)	878
Currency adjustment		2	15
Tax on equity postings		(7)	(26)
Tax on the profit for the year	267	155	112
	267	58	979
Paid on account for 2001		(130)	
Paid relating to previous years		(69)	
Paid for the year		(199)	
Tax at 31 December 2001	267	(141)	979
Tax receivable/deferred tax receivable		(212)	(38)
Tax payable/deferred tax		71	1,017
		(141)	979
Tax for the year:			
Current tax on the profit for the year	177		
Deferred tax adjustment	101		
Adjustment relating to previous year	(11)		
Tax on the profit for the year	267		
	1999	2000	2001
Computation of effective tax rate:			
Statutory corporation tax rate in Denmark	32.0%	32.0%	30.0%
Non-tax deductible expenses less non-taxable income	0.5%	1.5%	0.2%
Effect of Danish tax relief for foreign income	(0.4%)	–	–
Deviations in foreign subsidiaries' tax rates higher/(lower) than 32/30% – net	(2.2%)	(1.0%)	(0.2%)
Effect of change in tax rate from 32% in 2000 to 30% in 2001	–	(2.9%)	–
Other	2.0%	1.7%	0.7%
Effective tax rate	31.9%	31.3%	30.7%

Note 10 – Intangible fixed assets

	Acquired patents, licences and know-how	Goodwill	Total
	DKK million	DKK million	DKK million
Cost at 1 January 2001	152	55	207
Currency adjustment	1	–	1
Additions during the year	136	43	179
Disposals during the year	–	(55)	(55)
Cost at 31 December 2001	289	43	332
Amortisation at 1 January 2001	97	55	152
Currency adjustment	1	–	1
Amortisation for the year	13	1	14
Amortisation eliminated on disposals during the year	–	(55)	(55)
Amortisation at 31 December 2001	111	1	112
Book value at 31 December 2001	178	42	220

Note 11 – Tangible fixed assets

	Land and buildings	Production plant and machinery	Other equipment	Tangible assets in course of construction and payments on ac- count for tangible assets	Total
	DKK million	DKK million	DKK million	DKK million	DKK million
Cost at 1 January 2001	3,081	3,854	1,093	465	8,493
Currency adjustment	13	46	4	4	67
Additions during the year	64	29	75	317	485
Disposals during the year	(34)	(83)	(71)	–	(188)
Transfer (to)/from other items	58	54	162	(274)	–
Transfer to Fixed asset investments	(24)	–	–	–	(24)
Cost at 31 December 2001	3,158	3,900	1,263	512	8,833
Depreciation at 1 January 2001	929	2,314	719	–	3,962
Currency adjustment	(5)	19	3	–	17
Depreciation for the year	93	279	106	–	478
Depreciation eliminated on disposals during the year	(24)	(81)	(57)	–	(162)
Depreciation at 31 December 2001	993	2,531	771	–	4,295
Book value at 31 December 2001	2,165	1,369	492	512	4,538

Geographical distribution:

Denmark	2,394
USA	1,071
China	837
Rest of the world	236
	4,538

Note 12 – Fixed asset investments

	Other securities and participating interests DKK million
Cost at 1 January 2001	–
Transferred from Tangible fixed assets	24
Disposal during the year	(2)
Cost at 31 December 2001	22
Book value at 31 December 2001	22

Note 13 – Other debtors

	2000 DKK million	2001 DKK million
Interest receivable	11	10
Receivable from public authorities	60	21
Withholding tax receivable	162	2
Deposits	19	31
Prepaid expenses	54	55
Hedging instruments	96	31
Other debtors	71	63
Total other debtors at 31 December	473	213

Note 14 – Securities

	2000 DKK million	2001 DKK million
Bonds	294	–
Shares	166	193
Total securities at 31 December	460	193
At original acquisition cost	465	166
Duration of the Group's bond portfolio	0.1 year	–
Effective rate of interest on the Group's bond portfolio	5.7%	–

Notes

Note 15 – Shareholders' equity

	1999 DKK million	2000 DKK million	2001 DKK million
Share capital			
A share capital	107	107	107
B share capital	647	647	647
Share capital at 31 December	754	754	754
Other comprehensive income			
Currency adjustment of participating interests in subsidiaries:			
Currency adjustment at 1 January	(7)	256	357
Change for the year	263	101	75
Currency adjustment at 31 December	256	357	432
Other adjustments:			
Other adjustments at 1 January	(29)	(37)	(45)
Change for the year	(8)	(8)	12
Other adjustments at 31 December	(37)	(45)	(33)
Other comprehensive income at 31 December	219	312	399
Retained earnings			
Retained earnings at 1 January	1,967	2,371	2,772
Net profit for the year excluding proposed dividend for the year	410	359	456
Purchase of Novo Nordisk A/S shares before the Demerger	–	(189)	–
Transfer of Novo Nordisk A/S shares to Securities after the Demerger	–	166	–
Purchase of own participating interests	–	(8)	(424)
Value adjustment of hedging instruments	(6)	73	(45)
Retained earnings at 31 December	2,371	2,772	2,759
Proposed dividend			
Proposed dividend at 1 January	–	–	124
Dividend paid	–	–	(124)
Proposed dividend for the year	–	124	146
Proposed dividend at 31 December	–	124	146
Total shareholders' equity at 31 December	3,344	3,962	4,058
Weighted average number of A and B shares outstanding (excluding holding of own B shares):	75,438,872	75,296,239	73,611,470
Weighted average number of A and B shares outstanding (diluted) (excluding holding of own B shares and including options in-the-money):	75,438,832	75,407,953	74,279,224

Note 15 – Shareholders' equity (continued)

	2000 DKK million	2001 DKK million
Own participating interests		
Cost (DKK million)		
Cost at 1 January	–	21
Additions during the year	21	424
Disposals during the year	–	(0)
Cost at 31 December	21	445
Nominal value (DKK million)		
Nominal value at 1 January	–	2
Additions during the year	2	24
Disposals during the year	–	(0)
Nominal value at 31 December	2	26
Shares		
Shares at 1 January	–	182,241
Additions during the year	182,241	2,369,959
Disposals during the year	–	(2,200)
Shares at 31 December	182,241	2,550,000
Percentage of share capital		
Percentage of share capital at 1 January	–	0.2%
Additions during the year	0.2%	3.2%
Disposals during the year	–	(0.0%)
Percentage of share capital at 31 December	0.2%	3.4%

Of the holding of 2,550,000 own participating interests, 1,960,050 have been used to hedge share options issued.

Note 16 – Provisions for deferred tax

	2000 DKK million	2001 DKK million
Tangible fixed assets	508	537
Unrealised profit on intercompany sale	(82)	(100)
Write-down for doubtful debtors	(9)	(13)
Indirect production costs	118	125
Other	370	468
Total provisions for deferred tax at 31 December	905	1,017

Notes

Note 17 – Credit institutions – long-term

	2000 DKK million	2001 DKK million
Mortgage debt at an interest rate of 6%	22	22
Unsecured loans and other long-term loans with terms between 2004-2013 at an interest rate of 2.1–3.8%, excluding the amounts falling due within one year	880	1,895
Total credit institutions at 31 December	902	1,917

The debt is payable within the following periods as from the balance sheet date:

Between 1 and 2 years	–	2
Between 2 and 3 years	2	336
Between 3 and 4 years	321	1,000
Between 4 and 5 years	–	–
After 5 years	579	579
	902	1,917

The debt is denominated in the following currencies:

CHF	22	22
DKK	–	1,000
EUR	557	557
USD	321	336
Other	2	2
	902	1,917

Revaluation of the above loans to market value at 31 December 2001 would not have entailed a value adjustment.

Note 18 – Credit institutions – short-term

	2000 DKK million	2001 DKK million
Credit institutions	252	286
Loans with amounts falling due within one year	1,100	–
Total credit institutions at 31 December	1,352	286

The debt is denominated in the following currencies:

CNY	150	156
DKK	1,195	2
EUR	2	13
JPY	2	115
Other	3	–
	1,352	286

Note 19 – Foreign currencies in the consolidated balance sheet

Hedging of assets and liabilities in foreign currency

DKK million	Assets in DKK	Liabilities in DKK	Assets less liabilities in DKK	Contracted financial instruments in DKK	Net assets with transaction risk in DKK	Net assets with transaction risk in currency	Exchange rate at 31 December 2001 (for 100 units)
CHF	1	188	(187)	187	–	–	501.63
EUR	259	–	259	(498)	(239)	(32)	743.57
GBP	9	6	3	–	3	–	1,218.57
JPY	88	–	88	(88)	–	–	6.41
USD	496	517	(21)	–	(21)	(3)	840.95
Other	140	7	133	–	133	–	
	993	718	275	(399)	(124)		

Transaction risk is the possibility of gains/losses on transactions which are open at the balance sheet date, due to subsequent exchange rate changes. The gains/losses will be included in the profit and loss account.

Hedging of investments in foreign subsidiaries

DKK million	Net investment in foreign subsidiaries in DKK	Contracted financial instruments in DKK	Net assets with translation risk in DKK	Net assets with translation risk in currency	Exchange rate at 31 December 2001 (for 100 units)
CHF	405	(501)	(96)	(19)	501.63
CNY	854	–	854	840	101.95
EUR	76	–	76	10	743.57
GBP	16	–	16	1	1,218.57
JPY	129	(36)	93	1,465	6.41
USD	1,122	(756)	366	43	840.95
Other	218	–	218	–	
	2,820	(1,293)	1,527		

Translation risk is the possibility of gains/losses arising from translation of net assets in subsidiaries due to subsequent exchange rate changes. The gains/losses will be included directly in Other comprehensive income under Shareholders' equity.



"I feel as though I make a difference"

Tobias Björklund, aged 25, has recently joined the Finance team and is delighted to have made the move from one of the big Swedish companies in Stockholm to what he views as a young and dynamic organisation. Tobias has an MBA and will

spend the next two and a half years as an international trainee, getting to grips with every aspect of Novozymes Finance.

"I'm really pleased about working for Novozymes. I feel as though I make a difference. I'm involved in several financial

control projects and get to talk to lots of people and work with colleagues who have specialist expertise. Deadlines are a way of life and things happen here and now, which I really like. I'm used to hard work and a structured approach, but this is a more dynamic place, thanks in part to the relaxed atmosphere."

Tobias hopes to be seconded to China during his traineeship. In a couple of years' time he will have dealt with virtually the entire organisation, which will make him an even more professional sparring partner for the organisation.

Notes

Note 20 – Financial instruments in the Group

DKK million	Contract amount based on agreed rates	Gain/(loss) on revaluation to market value at 31 December 2001	Gain/(loss) included in 2001 profit and loss account	Charged directly to shareholders' equity 31 December 2001	Interest margin p.a.	Maturity periods
				To equity hedging	Deferred transfer to profit and loss account	
Forward exchange contracts, net sales						
CAD/DKK	7	–	–	–	–	Feb 2002
CHF/DKK	205	(2)	(2)	–	–	Jan–Feb 2002
JPY/DKK	322	26	7	–	19	Jan–Dec 2002
USD/DKK	601	(7)	(1)	–	(6)	Jan–Dec 2002
	1,135	17	4	–	13	
Currency options						
Purchased put options:						
USD/DKK	255	7	–	–	7	Apr–June 2002
JPY/DKK	77	8	–	–	8	Apr–June 2002
Sold call options:						
USD/DKK	285	–	–	–	–	Apr–June 2002
JPY/DKK	86	–	–	–	–	Apr–June 2002
	703	15	–	–	15	
Currency and interest rate swaps for equity hedging						
CHF/DKK	459	(40)	1	(42)	1	1.7% Sept 2008
JPY/DKK	38	4	1	2	1	4.9% May 2004
USD/USD	352	(10)	(2)	–	(8)	(3.0%) June 2004
USD/DKK	423	6	–	3	3	0.1% Nov 2005
	1,272	(40)	–	(37)	(3)	
Currency loan for equity hedging						
USD	263	(73)	–	(73)	–	June 2004
	263	(73)	–	(73)	–	
Currency and interest rate swaps						
EUR/DKK	500	7	1	–	6	(0.3%) Dec 2005
	500	7	1	–	6	
	3,873	(74)	5	(110)	31	

The Group's expected future cash flows in major currencies are hedged as follows:

Currency	Number of months hedged
JPY	12
USD	12

As the financial instruments are entered with major, creditworthy banks, they are not considered to be subject to significant credit risk.

Note 21 – Contingent liabilities and pending litigation

	2000 DKK million	2001 DKK million
Contingent liabilities		
Rental and lease commitments expiring within the following periods as from the balance sheet date:		
Within 1 year	24	27
Between 1 and 2 years	19	20
Between 2 and 3 years	15	15
Between 3 and 4 years	12	13
Between 4 and 5 years	11	13
After 5 years	94	81
Total contingent liabilities at 31 December	175	169

Of which commitments at 31 December 2001 to related parties amount to DKK 48 million. The above rental and lease commitments are related to non-cancellable operating lease contracts.

	2000 DKK million	2001 DKK million
The year's rental and lease expenses	45	50

Other contingent liabilities

Contractual obligations relating to investments in tangible fixed assets to third party	41	56
Other guarantees and commitments to third party	65	72
Other guarantees and commitments in the Group	257	279

Pending litigation

In November 2001, Danisco A/S brought an action before Det Danske Voldgiftsinstitut (Copenhagen Arbitration) claiming that Novozymes had unrightfully appropriated certain lipase-related inventions in connection with a cooperation project between the companies that has now been concluded, and inserted these inventions in its own patent application. Novozymes holds the opinion that the legal action is based on a number of misunderstandings, and moreover, Novozymes has made a counterclaim for damages for any detrimental effects on sales of Lipopan® F.

At the beginning of January 2002, Genencor International, Inc. took out an injunction against Novozymes for infringement of certain patent rights belonging to Genencor through the sale of Carezyme® to e.g. Procter & Gamble. Among other viewpoints Novozymes does not consider the patents to have been infringed by Novozymes.

In addition, Novozymes is engaged in certain other legal proceedings. In the opinion of the Board of Directors and Management settlement or continuation of these proceedings will not have a material effect on the financial position of Novozymes.

Liability for the debts and obligations of Novo Nordisk A/S

As a consequence of the Demerger of Novo Nordisk A/S into two companies, Novo Nordisk A/S and Novozymes A/S are jointly and severally liable in accordance with Section 136, subsection 3 of the Danish Companies Act for debts and obligations existing after 1 January 2000 but pertaining to the period before 1 January 2000, which cannot be clearly attributed to either Novo Nordisk A/S or Novozymes A/S, and which will be distributed proportionally between the two companies.

Note 22 – Related party transactions

Related parties are considered to be the Novo Nordisk Foundation, Novo A/S, the Novo Nordisk Group, and Houseowners' Associations and Energy Guilds that cooperate with the Novo Nordisk Group, as well as the directors and officers of these entities, and the directors and officers of Novozymes A/S.

The Novozymes Group has incurred the following expenses and generated the following income in respect of its related party transactions:

	2000 DKK million (purchase)/ sale	2001 DKK million (purchase)/ sale
Novo A/S		
Stakeholder service and facilitating	(26)	(19)
Novo Nordisk Group		
Purchase of Novo Nordisk A/S shares	(189)	–
Purchase of materials for production from Novo Nordisk A/S	(66)	(34)
Other services provided by Novo Nordisk A/S	(81)	(82)
IT services provided by Novo Nordisk IT A/S	(77)	(120)
Services provided by Novo Nordisk Servicepartner A/S	(101)	(145)
Services provided by Novo Nordisk Engineering A/S	(40)	(57)
Services provided to the Novo Nordisk Group	68	93
Houseowners' Associations and Energy Guilds		
Services provided to Novozymes A/S	–	(9)
Land and buildings and Other equipment sold to Houseowners' Associations and Energy Guilds	–	27

There have been no material transactions with the Novo Nordisk Foundation or with any director or officer of Novozymes A/S, Novo A/S, the Novo Nordisk Foundation or the Novo Nordisk Group.

Notes

Note 23 – Grants

During the financial year the Novozymes Group has received grants for research and development for DKK 38 million.

Note 24 – Reversals with no effect on cash flow

	1999 DKK million	2000 DKK million	2001 DKK million
Loss on sale of tangible fixed assets	2	6	12
Write-down for doubtful debtors	16	22	27
Taxation	192	220	267
Depreciation and amortisation	479	491	492
Realised (gain)/loss on shares and bonds (net)	18	(31)	(33)
Unrealised foreign exchange (gain)/loss	(142)	(38)	64
Interest receivable and interest payable	3	77	76
Other	(88)	41	22
Reversals with no effect on cash flow	480	788	927

Note 25 – Financial reserves

Financial reserves consist of cash at bank and in hand, securities and short-term credit institutions.

	1999 DKK million	2000 DKK million	2001 DKK million
Total securities			
at 1 January	770	373	294
Purchase of securities	235	587	–
Sale of securities	(647)	(666)	(294)
Unrealised gain/(loss) on securities	15	–	–
Securities at 31 December	373	294	–
Short-term credit institutions at 31 December	(149)	(252)	(286)
Cash at bank and in hand at 31 December	699	536	693
Financial reserves at 31 December	923	578	407
Securities with remaining term to maturity exceeding three months at 31 December	373	–	–
Financial reserves and securities with remaining term to maturity less than three months at 31 December	699	830	693

Note 26 – Expiration date for undrawn committed credit facilities

The current maturity of the undrawn committed credit facility exceeds one year.

Note 27 – United States Generally Accepted Accounting Principles

See page 9 for a description of the Group's accounting policies. The generally accepted accounting principles (GAAP) in the United States differ in a few respects from the accounting policies applied by the company. The areas for which US GAAP differ can be summarised as follows:

- Employee shares – according to Danish GAAP employee share issue at a favourable price is posted to shareholders' equity irrespective of the favourable price. According to US GAAP the difference between market price and the favourable price is employee costs and is taken to the profit and loss account.
- Financial instruments – according to Danish GAAP the fair value of foreign exchange contracts and options hedging future income and expenses is recognised to shareholders' equity. Under US GAAP such contracts are valued at market value and value adjustment is recognised in the profit and loss account.
- Share options and share-based remuneration – according to Danish GAAP no costs are included. According to US GAAP the intrinsic value of the option for fixed schemes is included as a cost at the time of allocation. For variable schemes the intrinsic value is adjusted in subsequent periods up to the time that the conditions for the scheme can be finally compiled. If no service period has been fixed the costs are accrued throughout the binding period.
- Goodwill – according to Danish GAAP goodwill is amortised over the expected economic life. According to US GAAP goodwill is not amortised, but instead recoverable value is subject to an annual impairment test, and write-down is made if net book value exceeds recoverable value.

Note 27 – United States Generally Accepted Accounting Principles (continued)

The application of the described accounting principles generally accepted in the United States would have resulted in an adjustment of net profit calculated on a Danish basis as follows:

	1999 DKK million	2000 DKK million	2001 DKK million
Net profit in accordance with Danish accounting principles	410	483	602
Employee share issue	(27)	–	–
Financial instruments	10	99	31
Share options	–	(38)	(10)
Goodwill	–	–	1
Tax on the difference between Danish and US GAAP:			
Employee share issue	2	–	–
Financial instruments	(3)	(32)	(10)
Share options	–	11	3
Net profit in accordance with the US Generally Accepted Accounting Principles	392	523	617
Net profit per share in accordance with US GAAP	5.20	6.95	8.38
Net profit per share (diluted) in accordance with US GAAP	5.20	6.84	8.31
Net profit per share (diluted) in accordance with Danish accounting principles	5.43	6.41	8.10

The application of the described accounting principles generally accepted in the United States would have resulted in an adjustment of shareholders' equity calculated on a Danish basis as follows:

	1999 DKK million	2000 DKK million	2001 DKK million
Shareholders' equity in accordance with Danish accounting principles	3,344	3,962	4,058
Goodwill	–	–	1
Shareholders' equity in accordance with the US Generally Accepted Accounting Principles	3,344	3,962	4,059


Challenges despite a shorter working day

Marianne Bie Nejsum, aged 34, is a production chemist and is responsible for the recovery and formulation of Sweetzyme®, which is produced at Novozymes' Fuglebakken plant in Copenhagen where she has worked since joining the company in 1994.

"I've come up against all kinds of challenges over the years, in that I have worked in four very different areas of production," explains Marianne, who has also taken time out to have two children. These days she has a shorter working day (one hour

less each day), but still throws herself into new projects with undiminished enthusiasm.

She loves working in the informal and close-knit production environment at Fuglebakken, where she considers the atmosphere to be unique. "Sweetzyme is produced in a continuous process, which means that any problems have to be sorted out here and now. I don't find making snap decisions particularly stressful – I like working under pressure."

Marianne has a busy time of it, both at home and at work: "But my four-year-old son always lets me go to work because he knows that what I do plays a vital role in the manufacture of fizzy drinks, sweets and cakes!"

Summary of the Novozymes Group 1997-2001

DKK million	1997	1998	1999	2000	2001
Profit and loss account					
Net turnover	4,347	4,264	4,501	5,033	5,271
Technical enzymes, etc.	3,366	3,192	3,289	3,548	3,447
Food enzymes	820	897	983	1,187	1,387
Feed enzymes	161	175	229	298	437
Employee costs	1,173	1,245	1,296	1,334	1,453
Research and development costs	570	604	607	645	678
EBITDA*	1,034	1,086	1,166	1,316	1,396
Operating profit	601	603	687	825	904
Financial items (net)	(128)	(39)	(85)	(120)	(33)
Profit before taxation	473	564	602	705	871
Tax on ordinary profit before tax	148	177	192	220	267
Net profit	325	393	410	483	602
Turnover in per cent					
Technical enzymes, etc.	77.4%	74.9%	73.1%	70.5%	65.4%
Food enzymes	18.9%	21.0%	21.8%	23.6%	26.3%
Feed enzymes	3.7%	4.1%	5.1%	5.9%	8.3%
Sale abroad in per cent of net turnover	98.7%	98.5%	98.1%	98.5%	97.7%
Research and development costs in per cent of net turnover	13.1%	14.2%	13.5%	12.8%	12.9%
EBITDA margin*	23.8%	25.5%	25.9%	26.1%	26.5%
Equity ratio*	30.8%	34.8%	41.3%	47.5%	48.1%
Operating profit margin*	13.8%	14.1%	15.3%	16.4%	17.2%
Net profit margin	7.5%	9.2%	9.1%	9.6%	11.4%
Effective tax rate*	31.3%	31.1%	31.9%	31.3%	30.7%
Balance sheet					
Cash and securities	1,114	1,241	1,072	996	886
Total assets	7,805	7,730	8,088	8,341	8,453
Current liabilities	642	832	1,034	2,390	1,283
Long-term liabilities	918	895	2,790	927	1,917
Net interest-bearing debt*	2,840	2,188	1,919	1,342	1,376
Shareholders' equity	2,405	2,677	3,344	3,962	4,058
Return on equity*	14.9%	15.5%	13.6%	13.2%	15.0%
ROIC*	7.5%	7.4%	8.4%	9.8%	12.0%
Investments and cash flows					
Investments in tangible fixed assets (net)	721	372	566	383	469
Investments in intangible fixed assets and fixed asset investments (net)	3	31	—	—	179
Free cash flow	(13)	628	230	655	487

DKK million	1997	1998	1999	2000	2001
Share data					
Earnings (net profit) per share in DKK (diluted)*	4.33	5.22	5.43	6.41	8.10
Cash flow from operating activities per share in DKK (diluted)*	9.48	13.70	10.55	13.79	15.28
Share capital (nominal) at year-end in DKK million	750	754	754	754	754
Number of A shares at year-end (million)	10.7	10.7	10.7	10.7	10.7
Number of B shares at year-end (million)	64.3	64.7	64.7	64.7	64.7
Number of shares outstanding at year-end (million)	75.0	75.4	75.4	75.4	75.4
Total number of shares outstanding	75.0	75.4	75.4	75.4	75.4
Weighted average number of shares outstanding (million)*	75.0	75.2	75.4	75.3	73.6
Employees (number at year-end)					
Denmark	1,974	1,995	1,936	1,943	2,003
Rest of Europe	137	137	150	143	182
USA	373	394	398	378	512
Rest of the world	642	682	706	744	778
Total	3,126	3,208	3,190	3,208	3,475
Employees abroad in per cent of total number of employees	37%	38%	39%	39%	42%

The consolidated accounts for 1999 and previous years are derived from the annual accounts of the former Novo Nordisk Group and are based on the historical operating results, assets, liabilities and shareholders' equity in the enzymes business.

* For definitions, please refer to the inner cover.



The value of technology

Svend Petersen, aged 41, has a background as a researcher but now works on patent strategy and research collaborations, focusing on the commercial use of technology that Novozymes develops itself or wishes to use.

"Working across disciplines like research, finance and law is exciting," says Svend, who is head of IP License and Strategy. "The department is responsible for the company's patent strategies, and our work with cross-organisational groups means that we help ensure a clear link between Novozymes' patent portfolio and business objectives. We also help formulate new cooper-

ation contracts with other companies and research environments, and we act as a link between the company's researchers and lawyers when we enter into agreements on others' rights that Novozymes wishes to use commercially."

The company's cooperation contracts include an agreement with Maxygen, whereby Novozymes and Maxygen give each other exclusive rights to use shuffling technologies, an offshoot of genetic engineering – an area in which both companies have been pioneers.

"This alliance is particularly exciting as it involves a general area of technology that can be used by all of Novozymes' business areas, and that can therefore give us a long-term advantage over our competitors."

Subsidiaries of Novozymes A/S

	Country	Year of incorporation/ acquisition		Issued share capital/ paid-in capital	Percentage of shares owned
Novozymes Australia Pty. Ltd.	Australia	1976	AUD	500,000	100
Novozymes Austria GmbH	Austria	1997	ATS	500,000	100
Novozymes Belgium BV	Belgium	2000	EUR	18,600	100
Novozymes Latin America Ltda.	Brazil	1975	BRL	23,601,906	100
Novozymes (China) Biotechnology Co. Ltd.	China	1994	CNY	859,058,400	90
Novozymes (China) Investment Co. Ltd.	China	1997	CNY	807,759,657	100
Novozymes (Shenyang) Bioprocessing Co. Ltd.	China	1994	CNY	9,069,311	100
Suzhou Hongda Enzyme Co. Ltd.	China	1994	CNY	34,769,000	62
Novozymes Bioindustrial A/S	Denmark	1974	DKK	1,000,000	100
Novozymes Bioindustrial China A/S	Denmark	1999	DKK	729,700,000	100
Novozymes Biologicals France S.A.	France	2001	EUR	650,000	100
Novozymes France S.A.	France	1976	FRF	300,000	100
Novozymes Deutschland GmbH	Germany	1991	DEM	500,000	100
Novozymes South Asia Pvt. Ltd.	India	1998	INR	50,000,020	100
Novozymes Italia S.r.l.	Italy	1978	ITL	20,137,208	100
Novozymes Biologicals Japan Ltd.	Japan	2001	JPY	30,000,000	100
Novozymes Japan Ltd.	Japan	1977	JPY	300,000,000	60
Novozymes Property Ltd.	Japan	1982	JPY	2,843,000,000	100
Novozymes Malaysia Sdn. Bhd.	Malaysia	1997	MYR	6,666,414	100
Novozymes Mexico, S.A. de C.V.	Mexico	1994	MXN	338,100	100
Novozymes Mexicana, S.A. de C.V.	Mexico	1994	MXN	338,100	100
Novozymes Netherlands B.V.	Netherlands	2000	EUR	18,000	100
Novozymes Singapore Pte. Ltd.	Singapore	1994	SGD	2,000,000	100
Enzymes S.A. (Pty) Ltd.	South Africa	1996	ZAR	100	49
Novozymes Korea Limited	South Korea	1991	KRW	3,300,000,000	100
Novozymes Spain S.A.	Spain	1989	ESP	60,000,000	100
Novozymes Switzerland AG	Switzerland	1998	CHF	5,000,000	100
Novozymes Switzerland Finance AG	Switzerland	1998	CHF	2,500,000	100
Novozymes Switzerland Holding AG	Switzerland	1967	CHF	3,000,000	100
Novozymes Enzim Dis Ticaret Limited Sirketi	Turkey	1998	TRL	T21,000,000	100
Novozymes UK Ltd.	United Kingdom	1977	GBP	1,000,000	100
Novozymes North America, Inc.	United States	1976	USD	17,500,000	100
Novozymes Biologicals, Inc.	United States	2001	USD	1,500,000	100
Novozymes Biotech, Inc.	United States	1992	USD	1,000	100
Novozymes US, Inc.	United States	2000	USD	115,387,497	100

Profit and loss account

	Note	2000 DKK million	2001 DKK million
Net turnover	1	3,127	3,341
Production costs	2	1,819	1,909
Gross profit		1,308	1,432
Sales and distribution costs	2	421	491
Research and development costs	2	626	614
Administrative expenses	2, 3	289	297
Licence fees and Other operating income (net)	4	520	542
Operating profit		492	572
Profit before tax in subsidiaries		371	323
Financial income	5	74	148
Financial expenses	6	234	174
Profit before taxation		703	869
Corporation tax	7	220	267
Net profit		483	602
Proposed appropriation of net profit:			
Dividend to shareholders		124	146
Net revaluation reserve according to the equity method		63	(226)
Retained earnings		296	682
		483	602



Further training after hours

Claudia Senegaglia, aged 28, is on a learning curve that enables her to develop professionally as she is given responsibility for new tasks. She has worked for Novozymes in Brazil for eight years. Today, her area is customer service and logistics.

"I'm in my third year of an administrative course. It's an evening programme planned to take four years. Novozymes covers all the costs, which is a great motivator," says Claudia Senegaglia.

Claudia has also worked in sales but as her new field required administrative skills too she was ready to take on this challenge.

"I'm working hard on my course, but fortunately we have a flexitime scheme so I can balance my job and my studies. Comparing my workplace to other companies I can appreciate that Novozymes takes a clear stand on human resources. They pay for my training, so that I can get better at doing my job. One day I hope to be able to meet people with similar job functions in other corners of the Novozymes world"

Balance sheet

Assets

	Note	31 Dec 2000 DKK million	31 Dec 2001 DKK million
Acquired patents, licences and know-how		55	178
Goodwill		–	–
Intangible fixed assets	8	55	178
Land and buildings		1,195	1,183
Production plant and machinery		949	797
Other equipment		291	355
Tangible assets in course of construction and payments on account for tangible assets		372	384
Tangible fixed assets	9	2,807	2,719
Participating interests in subsidiaries	10	2,306	2,204
Amounts owed by subsidiaries		–	50
Other securities and participating interests	10	–	22
Fixed asset investments		2,306	2,276
Total fixed assets		5,168	5,173
Raw materials and consumables		94	101
Work in progress		257	220
Finished goods		417	494
Stocks		768	815
Trade debtors		174	313
Amounts owed by related parties		709	528
Tax receivable		151	151
Other debtors	11	292	124
Debtors		1,326	1,116
Securities	12	460	193
Cash at bank and in hand		188	528
Total current assets		2,742	2,652
Total assets		7,910	7,825

Liabilities and shareholders' equity

	Note	31 Dec 2000 DKK million	31 Dec 2001 DKK million
Share capital		754	754
Net revaluation reserve according to the equity method		726	500
Retained earnings		2,358	2,658
Proposed dividend		124	146
Total shareholders' equity	13	3,962	4,058
Provisions for deferred tax (net)		514	533
Other provisions		4	4
Total provisions		518	537
Credit institutions	14	877	1,892
Amounts owed to related parties		25	-
Total long-term liabilities		902	1,892
Credit institutions		1,201	13
Trade creditors		112	221
Amounts owed to related parties		735	693
Tax payable		46	32
Other creditors		434	379
Total current liabilities		2,528	1,338
Total liabilities		3,430	3,230
Total liabilities and shareholders' equity		7,910	7,825

Notes regarding:

Contingent liabilities and pending litigation	15
Related party transactions	16



One big family

Ma Hong, aged 33, is responsible for instrumentation and automation of process equipment at Novozymes' production facility in Tianjin, China. She has worked there since 1996, before the factory was commissioned.

As head of the instrumentation department she knows every component of the process equipment in the factory, which has just been enlarged.

"With my staff, I have recently coordinated the instrumentation and automation of the new phase of the facility," relates

Ma Hong, who has a BS in Computer Science and Technology from Harbin Institute of Technology in China. Ongoing maintenance of process equipment is a part of her responsibilities and she is a member of a group of maintenance and engineering people from the facilities in Denmark, the USA and China. "We regularly swap our experiences and have also met a couple of times, when it was quite fantastic to see how people with the same technical background greeted each other like long-lost family members."

Notes

Note 1 – Net turnover

	2000 DKK million	2001 DKK million
By geographical area:		
Europe, Middle East, Africa	2,019	2,255
North America	375	383
Asia Pacific	648	596
Latin America	85	107
Total net turnover	3,127	3,341

Note 2 – Employee costs

	2000 DKK million	2001 DKK million
Wages and salaries	745	796
Pensions	37	42
Other contributions to social security	13	13
Other employee costs	30	30
Total employee costs	825	881

Included in the profit and loss account under the following functions:

Production	394	441
Sales and distribution	80	80
Research and development	241	225
Administration	105	132
	820	878

Included in the assets as:

Change in employee costs included in stocks	5	3
Total employee costs	825	881

For information on the total remuneration to the Management and the Board of Directors see Note 3 in the consolidated accounts.

Average number of employees in Novozymes A/S	1,903	1,968
--	-------	-------

Note 3 – Fees to statutory auditors

	2000 DKK million	2001 DKK million
Fees from Novozymes A/S to the Danish auditors elected by the annual meeting of shareholders:		
Total fee to PricewaterhouseCoopers, Hellerup	4	8
Total fee to Ernst & Young, Copenhagen	1	1
of which statutory audit fee to		
PricewaterhouseCoopers, Hellerup	2	2
Ernst & Young, Copenhagen	1	1

Note 4 – Licence fees and Other operating income (net)

	2000 DKK million	2001 DKK million
Other operating income (net)	5	12
Licence fees	515	530
Total licence fees and Other operating income (net)	520	542

Note 5 – Financial income

	2000 DKK million	2001 DKK million
Interest receivable	74	56
Gain on securities, etc. (net)	–	33
Foreign exchange gain (net)	–	59
Total financial income	74	148

Note 6 – Financial expenses

	2000 DKK million	2001 DKK million
Interest payable	193	155
Loss on securities, etc. (net)	1	–
Foreign exchange loss (net)	36	–
Other financial expenses	4	19
Total financial expenses	234	174
Of which interest relating to subsidiaries	34	19
Interest payable including capitalised financing interest	204	161
Capitalised financing interest under Tangible fixed assets	11	6

Note 7 – Tax

	2000 DKK million	2001 DKK million
Tax for the year:		
Current tax on the profit for the year	206	177
Deferred tax adjustment	39	101
Tax on the profit for the year	245	278
Adjustment relating to previous year	(25)	(11)
Tax on the profit for the year	220	267

For specification of tax see Note 9 in the consolidated accounts.

Note 8 – Intangible fixed assets

	Acquired patents, licences and know-how DKK million	Goodwill DKK million	Total DKK million
Cost at 1 January 2001	133	55	188
Additions during the year	135	–	135
Disposals during the year	–	(55)	(55)
Cost at 31 December 2001	268	0	268
Amortisation at 1 January 2001	78	55	133
Amortisation for the year	12	–	12
Amortisation eliminated on disposals during the year	–	(55)	(55)
Amortisation at 31 December 2001	90	0	90
Book value at 31 December 2001	178	0	178

Note 9 – Tangible fixed assets

	Land and buildings DKK million	Production plant and machinery DKK million	Other equipment DKK million	Tangible assets in course of construction and payments on ac- count for tangible assets DKK million	Total DKK million
Cost at 1 January 2001	1,738	2,746	820	372	5,676
Additions during the year	15	12	33	203	263
Disposals during the year	(32)	(83)	(61)	–	(176)
Transfer (to)/from other items	51	36	104	(191)	–
Transfer to Fixed asset investments	(24)	–	–	–	(24)
Cost at 31 December 2001	1,748	2,711	896	384	5,739
Depreciation at 1 January 2001	543	1,797	529	–	2,869
Depreciation for the year	46	198	62	–	306
Depreciation eliminated on disposals during the year	(24)	(81)	(50)	–	(155)
Depreciation at 31 December 2001	565	1,914	541	–	3,020
Book value at 31 December 2001	1,183	797	355	384	2,719

The latest official valuation of properties of the company for property tax purposes amounts to a total of DKK 1,060 million.

Notes

Note 10 – Fixed asset investments

	Participating interests in subsidiaries DKK million	Other securities and participating interests DKK million	Total DKK million
Cost at 1 January	1,489	–	1,489
Additions during the year	27	–	27
Transfer from Tangible fixed assets	–	24	24
Disposals during the year	(6)	(2)	(8)
Cost at 31 December 2001	1,510	22	1,532
Revaluation reserve at 1 January	963	–	963
Profit before tax	347	–	347
Corporation tax on profit for the year	(127)	–	(127)
Dividends received	(422)	–	(422)
Currency adjustment	89	–	89
Other adjustments	16	–	16
Revaluation reserve at 31 December 2001	866	–	866
Non-realised profit at 1 January 2001	(146)	–	(146)
Currency adjustment	(2)	–	(2)
Change for the year	(24)	–	(24)
Non-realised profit at 31 December 2001	(172)	–	(172)
Book value at 31 December 2001	2,204	22	2,226

Participating interests in subsidiaries are detailed on page 34.

Note 11 – Other debtors

	2000 DKK million	2001 DKK million
Interest receivable	11	10
Receivable from public authorities	61	20
Withholding tax receivable	34	–
Prepaid expenses	43	42
Hedging instruments	96	31
Other debtors	47	21
Total other debtors at 31 December	292	124

Note 12 – Securities

	2000 DKK million	2001 DKK million
Bonds	294	–
Shares	166	193
Total securities at 31 December	460	193
At original acquisition cost	465	166
Duration of the company's bond portfolio	0.1 year	–
Effective rate of interest on the company's bond portfolio	5.7%	–

Note 13 – Shareholders' equity

	2000 DKK million	2001 DKK million
Share capital		
A share capital – 10,748,720 shares of DKK 10 each	107	107
B share capital – 64,690,112 shares of DKK 10 each	647	647
Share capital at 31 December 2001	754	754

Total share capital at 31 December 2001
is 75,438,832 shares of DKK 10 each

**Revaluation reserve according
to the equity method**

Revaluation reserve according to the equity method at 1 January	663	726
Appropriated from net profit	63	(226)

**Revaluation reserve according to
the equity method at 31 December****Retained earnings**

Retained earnings at 1 January	1,927	2,358
Net profit for the year	296	682
Currency adjustment of investments in subsidiaries	101	75
Purchase of Novo Nordisk A/S shares before the Demerger	(189)	–
Transfer of Novo Nordisk A/S shares to Securities after the Demerger	166	–
Purchase of own participating interests	(8)	(424)
Value adjustment of hedging instruments	73	(45)
Other adjustments	(8)	12
Retained earnings at 31 December	2,358	2,658

Proposed dividend

Proposed dividend at 1 January	–	124
Dividend paid	–	(124)
Retained from proposed appropriation of net profit	124	146
Proposed dividend at 31 December	124	146

Total shareholders' equity at 31 December 3,962 4,058

For specification of own participating interests and the average
number of shares see Note 15 in the consolidated accounts.

Note 14 – Credit institutions

	2000 DKK million	2001 DKK million
Credit institutions	877	1.892
Credit institutions at 31 December	877	1.892

Long-term loans in credit institutions which fall due after 5 years amount to	557	557
--	-----	-----

Note 15 – Contingent liabilities and pending litigation

	2000 DKK million	2001 DKK million
Contingent liabilities		
Rental and lease commitments expiring within the following periods as from the balance sheet date:		
Within 1 year	10	10
Between 1 and 2 years	8	8
Between 2 and 3 years	7	7
Between 3 and 4 years	6	6
Between 4 and 5 years	6	6
After 5 years	35	21
Total contingent liabilities at 31 December	72	58

The above rental and lease commitments are related to non-
cancellable operating lease contracts.

The year's rental and lease expenses	17	21
--------------------------------------	----	----

Other contingent liabilities

Contractual obligations relating to investments in tangible fixed assets to third party	41	56
Other guarantees and commitments to third party	57	62
Other guarantees and commitments to related parties	699	678

The company is jointly and severally liable for all tax on the
jointly taxable income.

Pending litigation

For information on pending litigation see Note 21 in the consol-
idated accounts.

Liability for the debts and obligations of Novo Nordisk A/S

For information on liability for the debts and obligations of
Novo Nordisk A/S see Note 21 in the consolidated accounts.

Note 16 – Related party transactions

For information on transactions with related parties see Note
22 in the consolidated accounts.

Share information

The Novozymes share in 2001

2001 was the first full year of trading of the Novozymes share on the Copenhagen Stock Exchange. In 2001 the share price opened at DKK 159, which represents an increase of 6% against the initial price of DKK 150 when the share was first listed on 17 November 2000.

The share price closed the year at DKK 168.50, an increase of 6% from the beginning of the year.

The KFX index of the 20 most traded shares on the Copenhagen Stock Exchange fell by 14% during the year. The Novozymes share thus performed above the general market trend, and also better than a peer group of similar companies.

The Novozymes beta value expresses the price variation of the Novozymes share from the general KFX trend. As of end-2001 the beta value was 0.6.

The number of shares traded in 2001 totalled 49.6 million. This corresponds to a total market value of DKK 8.7 billion. The Novozymes share was thus the tenth most traded share in the KFX index.

During 2001 trading of the Novozymes share reached a stable level below the level during the first months of the year. Trading at the beginning of the year was abnormally high due to portfolio restructuring after the Demerger from Novo Nordisk. Moreover, a new method of compiling share trading on the Copenhagen Stock Exchange as from 1 July 2001 led to technically higher turnover of Novozymes shares in the first half of 2001 compared to the second half-year.

During the year Novozymes initiated a number of activities to ensure long-term value added. The most important took place in late summer 2001 when the Executive Management presented new strategic initiatives to improve growth in the existing enzyme business and apply Novozymes' considerable biotechnological expertise beyond the bounds of enzymes for industrial applications.

Two share buy-back programmes for approximately DKK 435 million in total were concluded during the year.

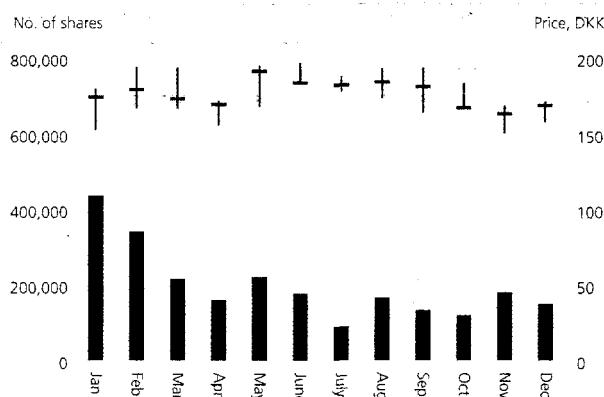
Novozyymes also made its first corporate acquisition on buying Sybron Biochemicals, now Novozymes Biologicals.

Share-related key ratios

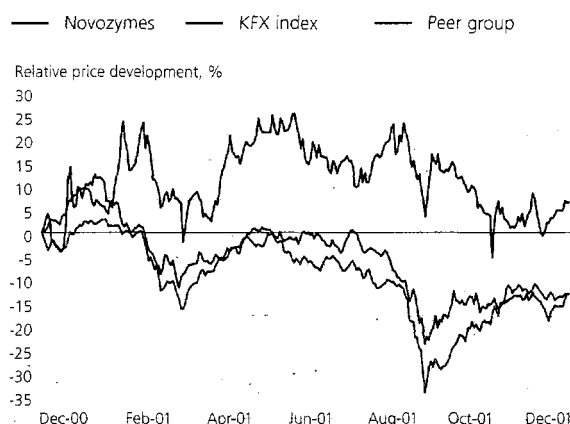
	2001	2000
Share price (DKK)		
– high	197	177
– low	151	140
– year-end	168.5	159
Turnover, all trades (DKK billion)	8.7	3.1
Year-end market capitalization (DKK billion)	12.7	12.0
No. of shares, average (million)		
– diluted	74.3	75.3
No. of shares at year-end (million)		
– issued	75.4	75.4
– outstanding	72.9	75.3
– diluted	73.7	75.4
Shares not strategically owned (free float)		
– all shares	74.9%	74.9%
– B shares	87.3%	87.3%
Earnings per share diluted (DKK)	8.10	6.41
Cash flow per share diluted (DKK)	15.28	13.79
Dividend per share (DKK)	2.00	1.65

Novozyymes' B share 2001 – turnover and high, low and year-end prices

- Turnover, no. of shares, daily average
- | Highest closing price – Lowest closing price
- Closing price



Novozymes' B share 2001 – relative share price performance versus KFX index and peer group



Peer group: Genencor, Chr. Hansen, Clariant, Ciba SC, Givaudan, DSM, Lonza and Rhodia. The price trend for the peer group is calculated as a simple average.

Communication with shareholders and investors

Novozymes communicates openly and proactively with all its shareholders, be they institutional or private.

Financial statements and other stock-exchange announcements are distributed immediately after publication to Danish and international news media. They are also published on the Internet, where a special section of www.novozymes.com, Investor Zone, is dedicated to communication with shareholders and investors. Investor Zone also gives those interested an opportunity to listen in on conference calls held on the quarterly release of financial results.

The Novozymes Annual Report is sent to all subscribing shareholders. Novozymes' Environmental and Social Report supplements the traditional Annual Report. Both are also available at Investor Zone.

A shareholder magazine is published twice a year – the first with the notice convening the annual meeting of shareholders, and the second in August, after the publication of the financial statement for the first half of the year.

During 2001 Novozymes held more than 250 investor meetings with institutional investors and equity analysts at the Group's headquarters in Bagsvaerd and in global

financial centres such as London, New York, Frankfurt and Paris. The material presented at these meetings is made available to all those interested via Investor Zone.

A new initiative is Novozymes' shareholder meetings held together with Danish banks to brief private investors and give them an opportunity to meet Novozymes' Executive Management for informal discussion of the company, its products and future.

Further information on and analysis of Novozymes can be obtained via the more than 15 leading banks and stock broking firms that monitor and report on the company's results on an ongoing basis. A complete list of equity analysts that monitor Novozymes is presented at Investor Zone.

Financial calendar 2002

20 March 2002	Annual meeting of shareholders Radisson SAS Falconer Center Falkonér Allé 2000 Frederiksberg, Denmark
8 May 2002	First quarter 2002 financial statement
14 August 2002	First half 2002 financial statement
6 November 2002	First nine months 2002 financial statement

Share information

Novozymes A/S' B shares are listed on the Copenhagen Stock Exchange and are traded under the abbreviated name NZYM B and the ID code/ISIN DK0010272129.

The B shares are issued in units of DKK 10.

Share capital and voting rights

	Share capital (DKK million)	Votes	% votes
A shares	107,487,200	1,074,872,000	62.4
B shares	646,901,120	646,901,120	37.6
Total	754,388,320	1,721,773,120	100.0

The A share capital is held by Novo A/S, which is wholly owned by the Novo Nordisk Foundation. In addition, Novo A/S holds 8,194,780 B shares, which overall gives Novo A/S 25.1% of the total share capital and 67.2% of the votes, so that Novozymes is included in the ►►

consolidated accounts of the Novo Nordisk Foundation.
Novo A/S is domiciled in Gladsaxe, Denmark.

Breakdown of B shareholders

	% of B shares
Novo A/S	13
Danish ATP	8
Fidelity Investments	7
Novozymes A/S	4
Other large institutions, companies, foundations and other	Approx. 53
Private	Approx. 15
Total	100

Geographical distribution of B shareholders

	% of B shares
Denmark	55
North America	21
UK	11
Other Europe, etc.	13
Total	100

Dividend

The Board of Directors propose payment of dividend at 24% of net profit for 2001, equivalent to DKK 2.00 per DKK 10 A/B share, up from DKK 1.65 in 2000.

Dividend is disbursed in DKK less the statutory 28% deduction of Danish tax. Shareholders resident in certain countries are eligible for a refund of dividend tax deducted in Denmark, subject to the double tax conventions in force between Denmark and the countries concerned.

Dividend dates

Resolution adopted at the annual meeting of shareholders	20 March 2002
Last day of trading of the Novozymes share with right to dividend for 2001	20 March 2002
First day of trading of the Novozymes share without right to dividend for 2001	21 March 2002
Dividend cut-off date	25 March 2002
Disbursement of dividend	26 March 2002

Tax information

Shareholders who received shares in Novozymes A/S on the Demerger of Novozymes A/S from Novo Nordisk A/S must use the following method to calculate the taxable acquisition value of their Novozymes shares:

The Danish tax authorities have approved the calculation of the acquisition value of the shares of Novozymes A/S shareholders by multiplying the original acquisition value of the Novo Nordisk A/S shares by 9.3%.

Tax authorities in other countries have adopted other compilation methods.

Registration number

Novozymes A/S is registered with the Danish Commerce and Companies Agency under 10 00 71 27.

Dialogue and contact

Shareholders and investors, equity analysts and others from the financial world are welcome to direct enquiries and questions to Investor Relations:

Michael Steen-Knudsen, Senior Director
Novozymes A/S, Krogshoejvej 36, 2880 Bagsvaerd
Denmark. Tel. (+45) 4442 6048, fax (+45) 4442 1002
E-mail: mskn@novozymes.com

Thomas Kudsk Larsen, Manager
Novozymes A/S, Krogshoejvej 36, 2880 Bagsvaerd
Denmark. Tel. (+45) 4442 5969, fax (+45) 4442 1002
E-mail: tkla@novozymes.com

Shareholder enquiries concerning dividend payments and the Novozymes shareholder register in general (share certificates, lost shares, etc.) should be directed to:

Nordea Bank Danmark A/S
Issuer Services, Postbox 850, 0900 Copenhagen C,
Denmark. Tel. (+45) 3333 3301, fax (+45) 3333 1031

Board of Directors



Henrik Gürtler, Ulla Morin, Walther Thygesen, Paul Petter Aas, Jerker Hartwall, Hans Werdelin, Lars Bo Køppler, Arne Hansen and Kurt Anker Nielsen.

Henrik Gürtler

Born 1953, Chairman

CEO, Novo A/S

Other board positions

Chairman: Dansk Management Forum

Member: COWI A/S

Paul Petter Aas

Born 1946

Senior Vice President, Norsk Hydro ASA, Norway

Jerker Hartwall

Born 1952

CEO, Karlshamns AB, Sweden

Kurt Anker Nielsen

Born 1945, Vice Chairman

CEO, Novo A/S

Other board positions

Chairman: Incentive A/S

Member: Coloplast A/S, DAKO A/S
and Novo Nordisk A/S

Walther Thygesen

Born 1950

CEO, Compaq Computer ApS and Regional Vice

President, Compaq Computer Corporation

Other board positions

Chairman: Twinsoft A/S

Member: Thrane & Thrane A/S

Hans Werdelin

Born 1938

Director

Other board positions

Chairman: CW Obel A/S, Danske Trælast A/S, Lomax A/S
and Publicis A/S

Vice Chairman: Navision A/S, Skandinavisk Holding A/S
and Skandinavisk Tobakskompagni A/S

Member: Novo A/S and Peacock Travel A/S

Employee representatives on the Board of Directors:

Ulla Morin, born 1954, laboratory technician

Arne Hansen, born 1951, skilled worker

Lars Bo Køppler, born 1962, technician

Executive Management



Per Falholt, Anne-Marie Skov, Arne W. Schmidt, Steen Riisgaard, Jesper Allentoft, Per Månsson and Peder Holk Nielsen.

Steen Riisgaard

Born 1951

President and CEO

Other board positions

Member: World Wildlife Fund (WWF) in Denmark and
The Copenhagen Centre, New Partnerships for Social
Responsibility

Per Månsson

Born 1954

Executive Vice President and CFO, IT and Legal Affairs

Per Falholt

Born 1958

Executive Vice President and CSO

Other board positions

Member: IT Practice A/S

Peder Holk Nielsen

Born 1956

Executive Vice President, Sales & Marketing

Arne W. Schmidt

Born 1945

Executive Vice President, Production,
Procurement & Quality

Besides the executive officers Executive Management
also includes the vice presidents responsible for Human
Resources and Stakeholder Communications.

Jesper Allentoft

Born 1955

Vice President, Human Resources

Anne-Marie Skov

Born 1953

Vice President, Stakeholder Communications

Affiliates and offices

**Novozymes, with headquarters in Denmark,
is represented in the countries stated below:**

Novozymes A/S
Krogshøjvej 36
DK-2880 Bagsvaerd
Tel. (+45) 8824 9999
Fax (+45) 8824 9998
info@novozymes.com
www.novozymes.com

Australia	Mexico
Austria	Netherlands
Belgium	Poland
Brazil	Russia
China	Singapore
Denmark	South Africa
France	South Korea
Germany	Spain
Greece	Switzerland
India	Turkey
Italy	United Kingdom
Japan	USA
Malaysia	

A list of company addresses can be found on
www.novozymes.com under 'About us'.



Novozymes A/S
Rogshøjvej 36
2880 Bagsvaerd
Denmark

Tel +45 8824 9999
Fax +45 8824 9998
info@novozymes.com



For more information
or international
office addresses
please see
www.novozymes.com

sustainable octane counts

enzymes can make the dream of
greater miles come true

newman

“My vision is that enzymes will be used in every line of manufacturing and in every household. This environmentally friendly technology has the potential to replace traditional chemicals, reduce pollution and waste, and significantly improve our standard of living.”



Stein Riisgaard
President and CEO of Novozymes

Enzymes save energy by washing clothes cleaner at lower temperatures

Leathering skins and hides with enzymes cuts down on chemicals

Novozymes

2001 Novozymes launched new enzyme to replace amylase in bread

Environmental award to BioPrep®
Prestigious American environmental award to textile finishing enzyme in 2001